

AUG 20 1927

MOTOR AGE

A Chilton Class Journal Publication
Published Weekly August 18, 1927

The delivery of a smaller number of good cars, with a higher unit profit per car, is the remedy for many a dealer's ills.

Money in the bank is the important thing — not the number of cars on the street.

That's been the Jordan idea for eleven years.

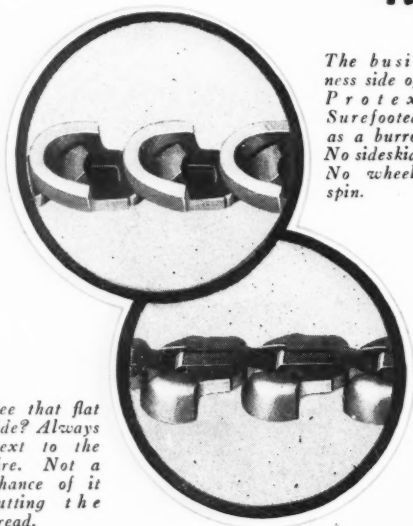
Edward S. Jordan

President
Jordan Motor Car Company, Inc.
Cleveland

Even the grueling wear of bare concrete



cannot break down this super-strength
new-type tire chain



The business side of Protex. Surefooted as a burro. No sideskid. No wheel-spin.

See that flat side? Always next to the tire. Not a chance of it cutting the tread.

Protex Chains are built of the finest chrome-silicon steel—specially heat-treated to resist abrasion. Almost wearproof! Use them steadily in city running. Laugh at bare, wet concrete and cobblestones.

Motorists welcome this new-type chain—their idea of what an anti-skid tire chain should be. The first chain that guarantees prevention from skid *in any direction*. Every link of Protex is built the shape of a horseshoe—and a full inch wide. Traction! Even on glassy, ice-coated streets they can't slip. Sideskid and wheelspin absolutely overcome!

Truly . . . Protex is a remarkable advance in tire chain construction.

Investigate!

Ask your jobber's salesman—or write us direct.

* When writing—be sure to get the Protex Tire and Tire Chain Size Chart—FREE!

Protex Chain Company
Waynesboro, Pa.

IPROTEX

= TIRE CHAINS =

Women Especially Appreciate Easier Steering

Show them how much more thoroughly the vital parts of the steering gear are lubricated when the weight is off the wheels and the job is at working height. Driving ease is a vital matter

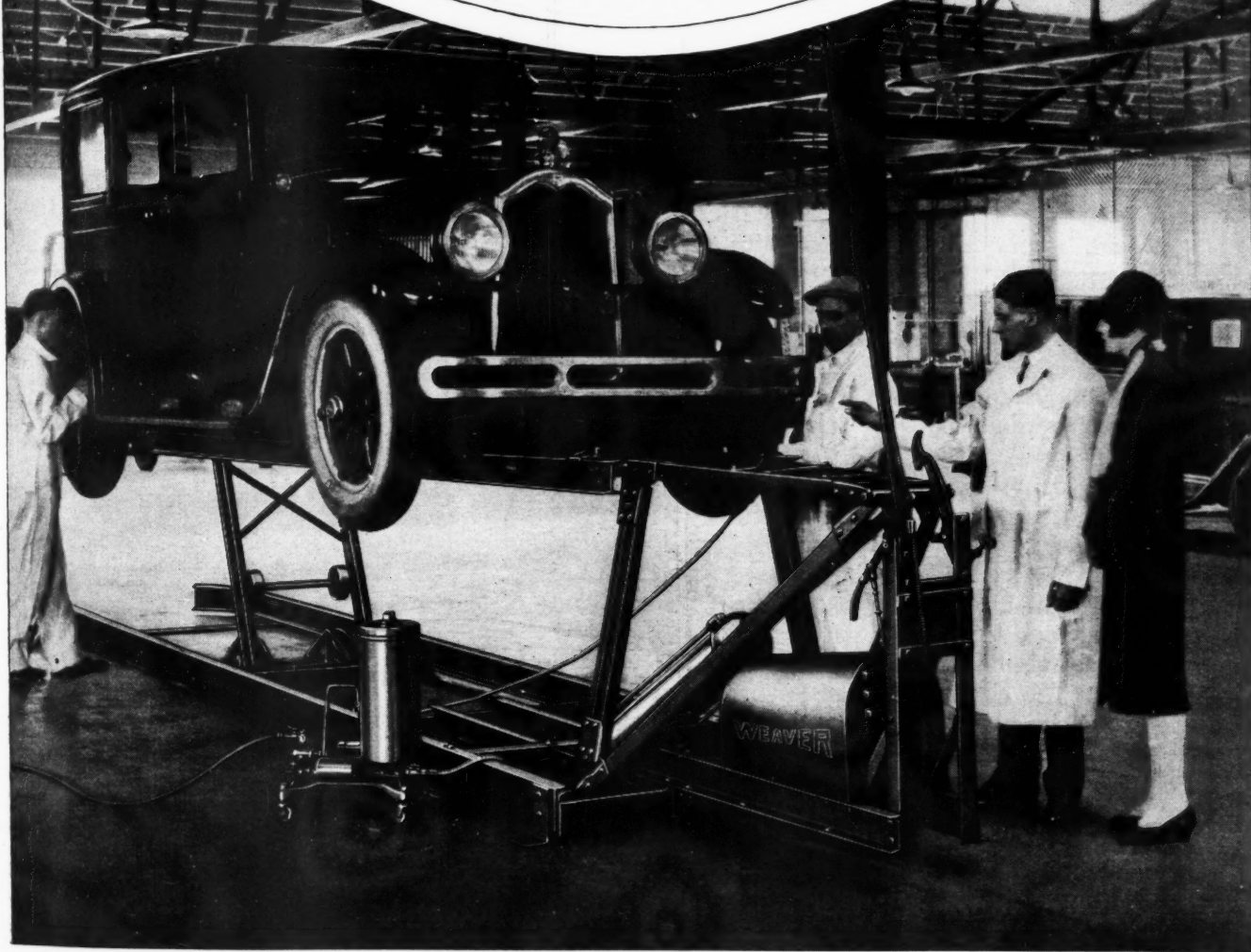
to women. And no matter what other service brings them in, they are always interested in easier steering. The Safety Auto Lift brings business friends. And business friends are Profit!

Investigate These Features:

- Can be placed anywhere—inside or outside—where electric power is available;
- Lift can be stopped at any desired height to suit convenience of mechanic;
- Maximum elevation most convenient for general underbody service;
- Speedy—raises car in one minute and lowers in half minute;
- No driving up and climbing down from elevated position;
- Rated capacity 5500 lbs.—with ample margin of safety;
- No danger of lowering car accidentally or dropping car;
- Elevates car by axles, leaving wheels free for repairs;
- No elevated tracks to worry inexperienced drivers;
- Easy to get at all lubrication points;
- No installation expense;
- Write for complete information.

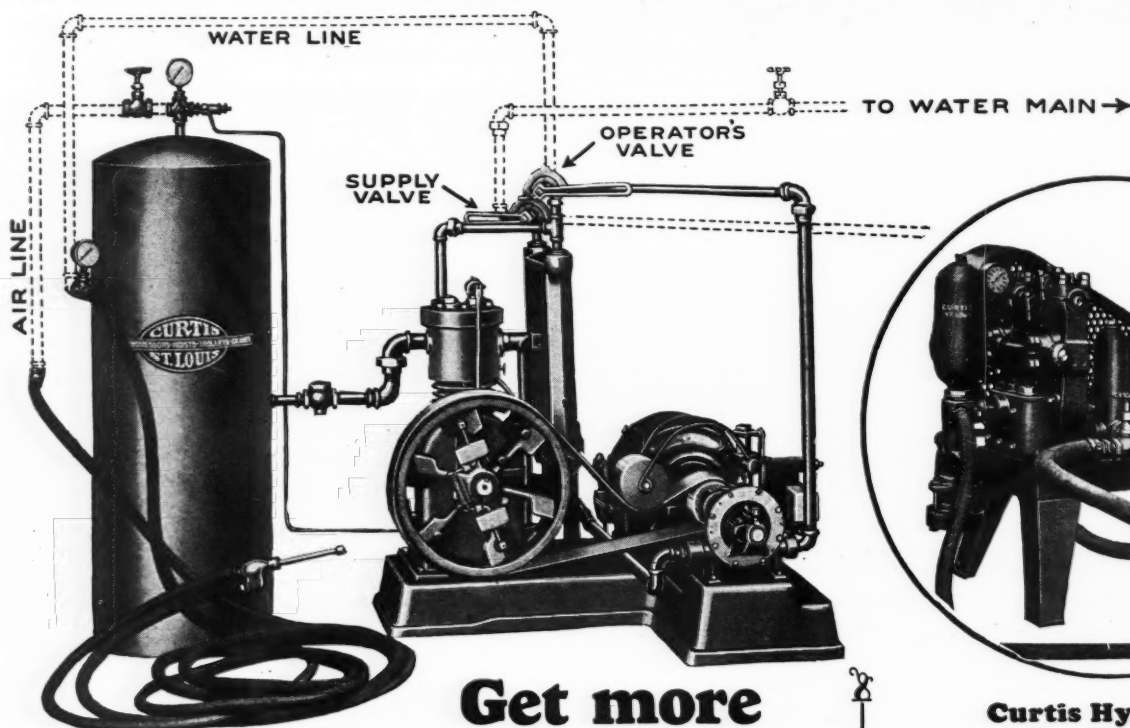
WEAVER MANUFACTURING COMPANY
Springfield, Illinois, U. S. A.

Weaver Canadian Co., Ltd
Chatham, Ont., Canada



WEAVER SAFETY AUTO LIFT

CURTIS COMPRESSORS, HOISTS, CRANES, CAR WASH SYSTEMS, PORTABLE COMPRESSOR UNITS



Get more than just the single Washing Profit

Wash a car and you make money — clean the upholstery and your profit increases — clean the motor and there is still more money flowing into your cash register.

And so on—every little supplementary service you add brings just that much more profit.

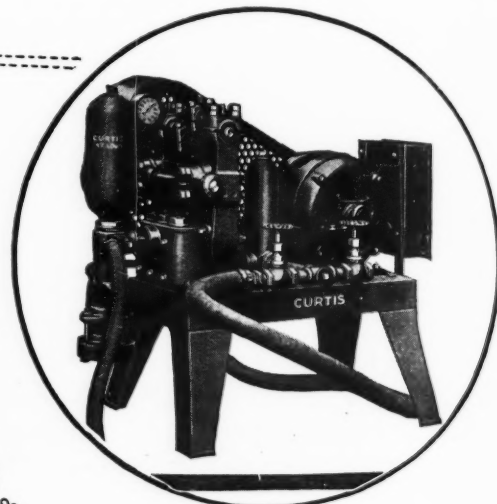
Do all these additional jobs with an Air Mist outfit and the added profits pile up, way out of proportion to the extra time and labor involved.

After you have washed a car quickly and safely, then there are numerous other things that you can

do with the air-powered attachments of the Air Mist; spray polish on body, spray-clean the motor, spray oil on springs, spray paint on rust spots, spray paint remover and completely repaint, and many other money-making jobs.

Besides, you have compressed air for inflating tires, operating lifts, hoists, and numerous small pneumatic tools.

Let us tell you more about the great variety of profitable services performed by Air Mist. Mailing the coupon will not obligate you in any way.



Curtis Hydraulic Car Washer

If you require additional washing capacity to supplement the Air Mist System or if your needs do not yet justify the more extensive Air Mist equipment, the Curtis Hydraulic Car Washer will solve your problem.

May be had in standard one-gun, standard two-gun or oversize two-gun styles. Nozzles adjustable for throwing strong chassis-cleaning stream or harmless spray for washing body.

Occupies little floor space. Requires no special foundation. May be connected quickly to water and electric lines or will take water or special cleaning solutions from tank.

Like the Air Mist outfit, this effective unit embodies all the refinements that could be built into it by the engineering and construction experts of the 73 year old Curtis organization.

Also, like other Curtis Equipment, both the Air Mist and the Hydraulic Washer are "Easy to Buy" from dealers and jobbers everywhere.

MAIL COUPON TODAY

CURTIS Pneumatic Machinery Co.
1957 Kienlen Ave., St. Louis, Mo.
518-U Hudson Terminal, New York City.

Please send me full information about Curtis Air and Hydraulic Car Washers.

Name _____

Address _____

City _____ State _____

A-6

CURTIS

AIR and HYDRAULIC

CAR WASHERS

CURTIS PNEUMATIC MACHINERY COMPANY, ST. LOUIS, U.S.A.

MOTOR AGE

Vol. LII

Reg. U. S. Pat. Off.
Established 1899

No. 7

JULIAN CHASE, Directing Editor
C. EDWARD PACKER, Technical Editor
JOHN C. GOURLIE, News Editor
L. C. DIBBLE, Detroit News Rep.
JOHN CLEARY, Editor
GEORGE T. HOOK, Associate Editor
S. G. SWIFT, Assistant Editor
TOM WILDER, Architectural Editor
ATHEL F. DENHAM, Field Editor

CONTENTS

News of the Industry and Trade	9
John Cleary Says—	24
Gas, Oil and Hot Dogs—Drive in	24
Then and Now in Motor Age	25
Fishing for Fish and for Prospects. By John Cleary	26
18 Years an Average Salesman, and Then— By Mandus E. Bridston	28
Gardner Line for 1928. By C. Edward Packer	31
Chrysler "72" Features Greater Performance and Comfort	32
When a Prospect Balks. By Harold J. Ashe	35
Are You Primitive or Modern? By S. G. Swift	36
Graham Adopts 6-Cylinder Engine and 4-Speed Transmission. By Athel F. Denham	39
Fafnir Develops Shackle of the Ball-Bearing Type	41
Making the Most Out of the Available Space. By Tom Wilder	42
Too Late to Start? Certainly Not	43
New Devices and Accessories	44
Readers' Clearing House	45
Purrs and Pings	50
Prices and Weights of Current Passenger Car Models	51
Mechanical Specifications of Current Passenger Car Models	54
Advertisers' Index	88-89

MOTOR AGE is published every Thursday by

CHILTON CLASS JOURNAL COMPANY

Chestnut and 56th Streets, Philadelphia, Pa.

C. A. MUSSELMAN, President and General Manager
J. S. HILDRETH, Vice-Pres. and Director of Sales
W. I. RALPH, Vice-Pres. DAVID BEECROFT, Vice-Pres.
A. H. VAUX, Secretary and Assistant Treas.
H. J. REDFIELD, Treasurer
Cable Address Autoland, Philadelphia
Telephone Sherwood 1424

OFFICES

New York—U. P. C. Bldg., 239 W. 39th St., Phone Pennsylvania 0080
Chicago—5 South Wabash Ave., Phone Central 7045
Detroit—710 Stephenson Bldg., Phone Northway 2090
Cleveland—540 Guardian Bldg., Phone Main 6860
Indianapolis—519 Merchants Bank Bldg., Phone Riley 3212

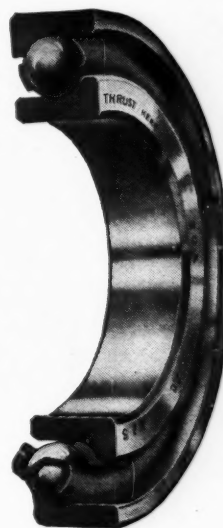
Owned by United Publishers Corporation, 239 West 39th Street, New York; ANDREW C. PEARSON, Chairman, Board of Directors; FRITZ J. FRANK, President; C. A. MUSSELMAN, Vice-President; F. C. STEVENS, Treasurer; H. J. REDFIELD, Secretary.

SUBSCRIPTION RATES: United States, Mexico and U. S. Possessions, \$3.00 per year; Canada, \$5.00 per year; All other countries in Postal Union, \$6.00 per year; Single Copies, 35 cents.

COPYRIGHT 1927, CHILTON CLASS JOURNAL COMPANY

Member of the Audit Bureau of Circulations
Member, Associated Business Papers, Inc.

Subscriptions accepted only from the Automotive Trade
Entered as Second Class Matter, June 2, 1927, at the Post Office at Philadelphia, Pa.
under Act of March 2, 1879

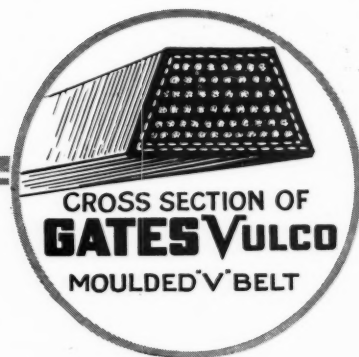
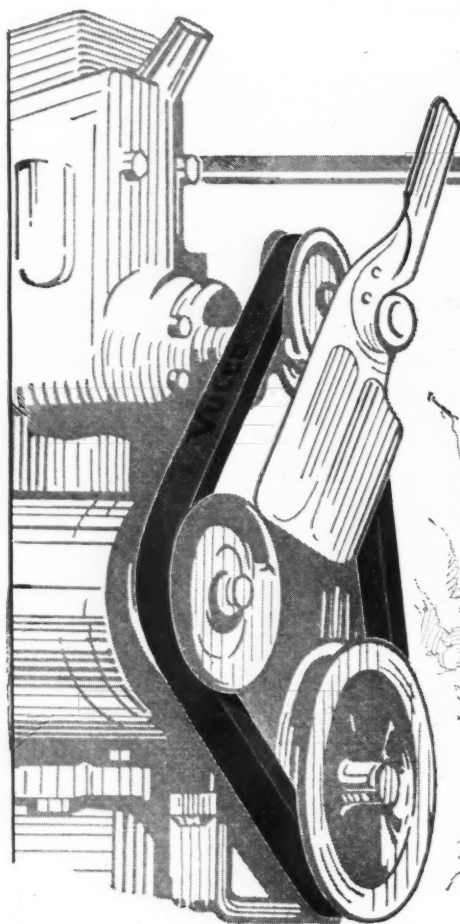


Hidden Strength

The real stamina of a car is not seen from the outside—it is hidden away in the bearings where the heaviest loads are carried. B. C. A. Bearings provide strength at the points where it is most needed. Their accuracy is insurance on the life of the car.

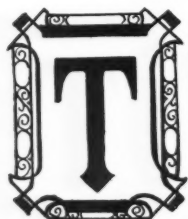
B. C. A. Bearings are the product of "Bearings Headquarters."

Bearings Company Of America
Plant Lancaster, Penna.
Detroit Michigan Office 1012 Ford Building.

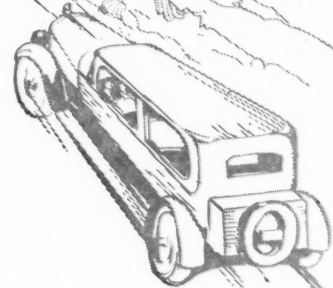


THE "V" BELT
*That is built
 like a cord tire*

60 to 80 endless cords run clear around every Gates Vulco V-Belt. Built like a cord tire, it is non-stretch and almost unbreakable. That is why the Gates Vulco V-Belt is giving extra service and pleasing your customers.



HERE'S a nice extra profit lurking under the hood of nearly every car that drives up with a hot engine. Take a look at the fan belt. Four times out of five it is old, worn, soaked with oil, and glazed with dirt. No wonder it is *slipping*. Naturally the engine overheats. Replace that belt with the belt that really grips the pulley—the Gates Vulco. This little extra courtesy and attention pleases your customer—and it puts more profit in your "till" than selling 5 gallons of gas.



"The Standardized Fan Belt"

GATES VULCO BELTS

"Manufactured by the World's Largest Makers of Fan Belts"



This modern building is proof of the profit in making New Orleans a Studebaker town

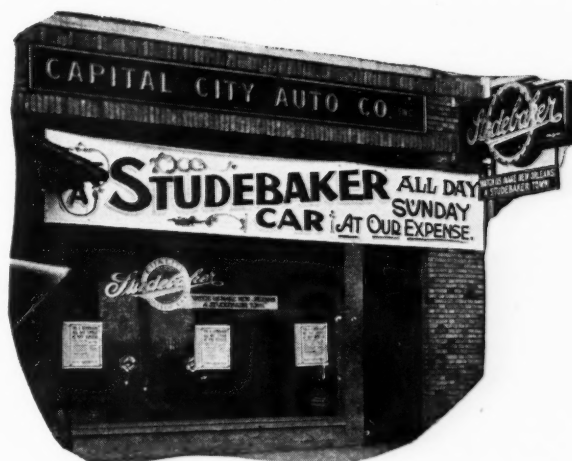
\$1000 Capital Grew to \$600,000 Business in 11 Studebaker Years

IN 1915, the Capital City Auto Company, Studebaker dealer in Baton Rouge, opened another Studebaker business in New Orleans with \$1000 capital. Only 2700 feet of floor space was needed for salesroom, parts and service.

In 1927, the Capital City Auto Company fills 75,000 square feet with a busy Studebaker-Erskine business, conservatively valued at \$600,000!

Fred Perkins, president, says, "I hope our profitable experience will convince any dealer who is slow to change his business or cautious in selecting another line. The results we obtained by using business judgment and following the factory's progressive policy will be duplicated in any city or, relatively, in any small community with the now doubly valuable Studebaker-Erskine franchise."

This valuable Studebaker-Erskine franchise may be inadequately represented in your territory—or not at all. Wire or write *today* for complete and confidential information. Address Department 51, The Studebaker Corporation of America, South Bend, Indiana.



In 1915, the Capital City Auto Company learned the quickest way of proving Studebaker goodness was to get a prospect at the wheel

STUDEBAKER

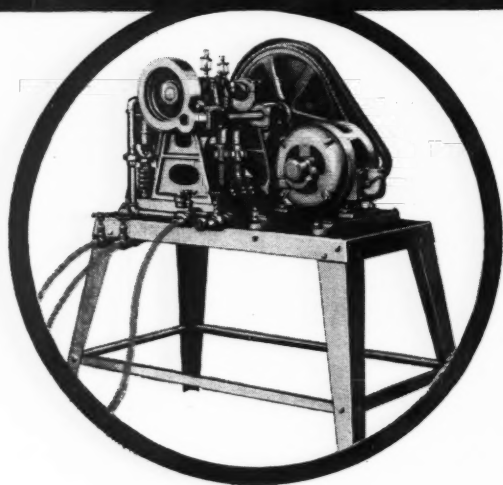
ERSKINE SIX

Two franchises in one—offering cars from \$895 to \$2250



HARDIE

DEPENDABLE CAR WASHER



A three-cylinder
pump in every
Hardie model

Constant pres-
sure under all
conditions of use

Why the Hardie Is Stronger and Better

A HARDIE CAR WASHER today represents years of intensive specialization in the building of high-pressure pumps. There are a lot of things designed and built into a Hardie Dependable Car Washer that exist in no other pump or car washer. These important engineering achievements have been discovered, perfected and proved by Hardie in a long and successful service to users of such equipment.

You can get the maximum profit from car washing *only* when you have a car washer that represents the maximum of capacity, power, pressure, dependability.

- We can prove point by point that a Hardie of any given rating will wash more cars and do it better than any other car washer you can buy. The specifications tell the story. And the experience of hundreds of service men shows that car washing became really profitable for them when they put in Hardie equipment. By all means get into the car washing business. But get in right. Know about the Hardie. We will gladly send you all the facts.

For Sale by Leading Jobbers Everywhere

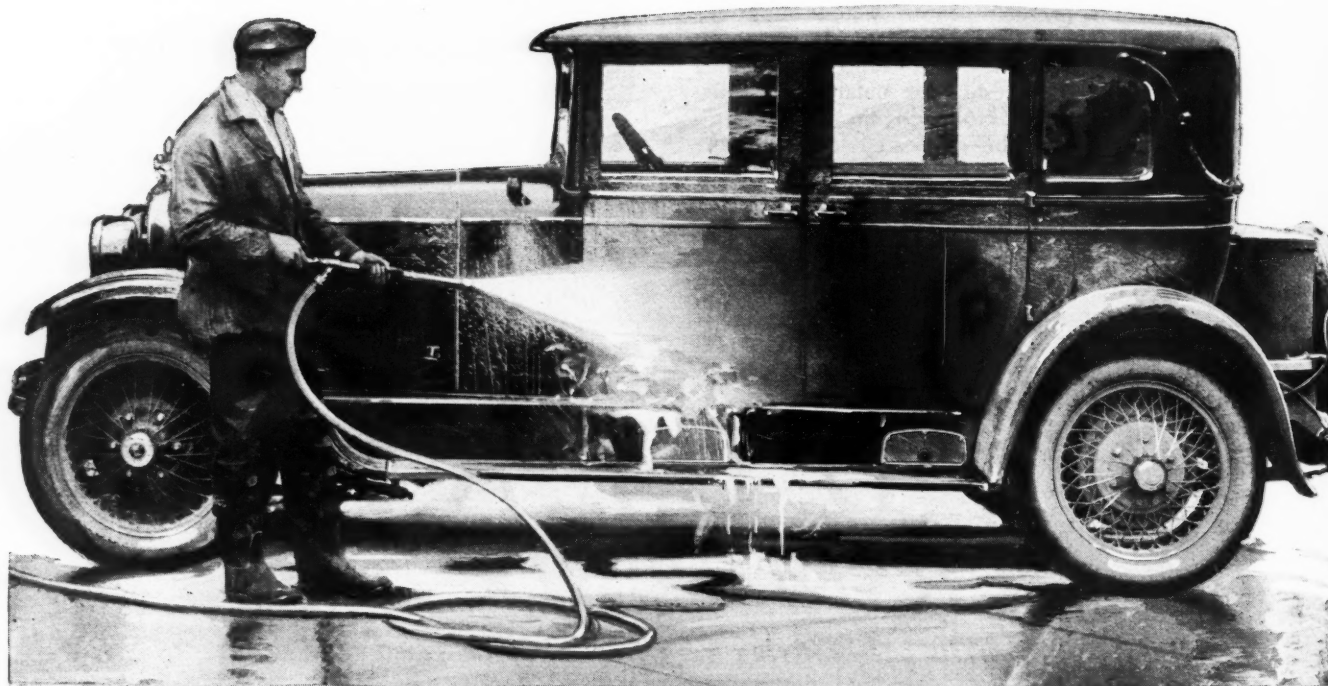
THE HARDIE MFG. COMPANY
Main Office and Factory, Hudson, Mich.

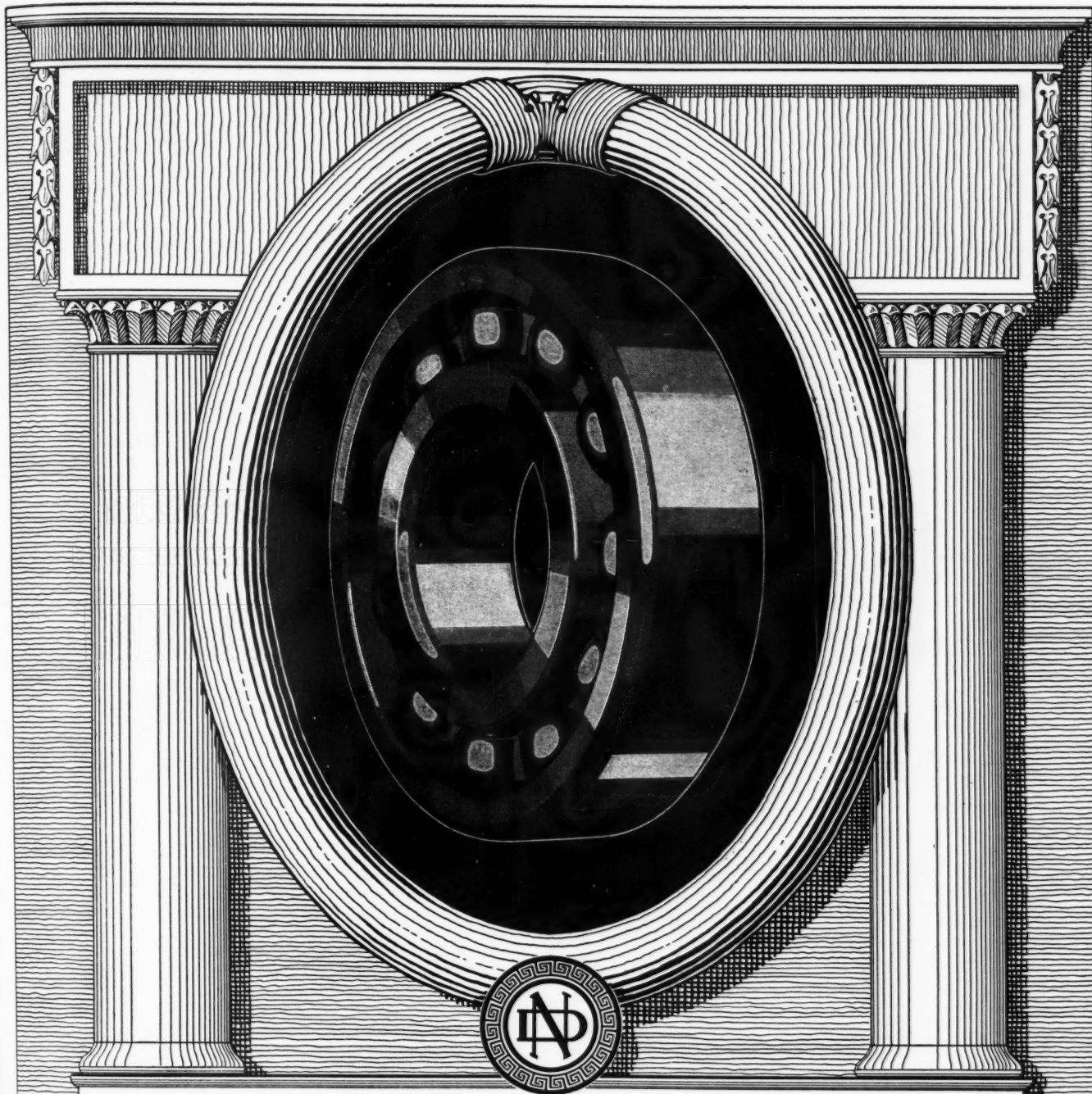
Western Factory
PORTLAND, OREGON

Canadian Factory
PETROLIA, ONTARIO

Branches: 222 N. Los Angeles St., Los Angeles, Calif.
1780 Broadway, New York.

Export Department, 120 Madison Avenue, Detroit



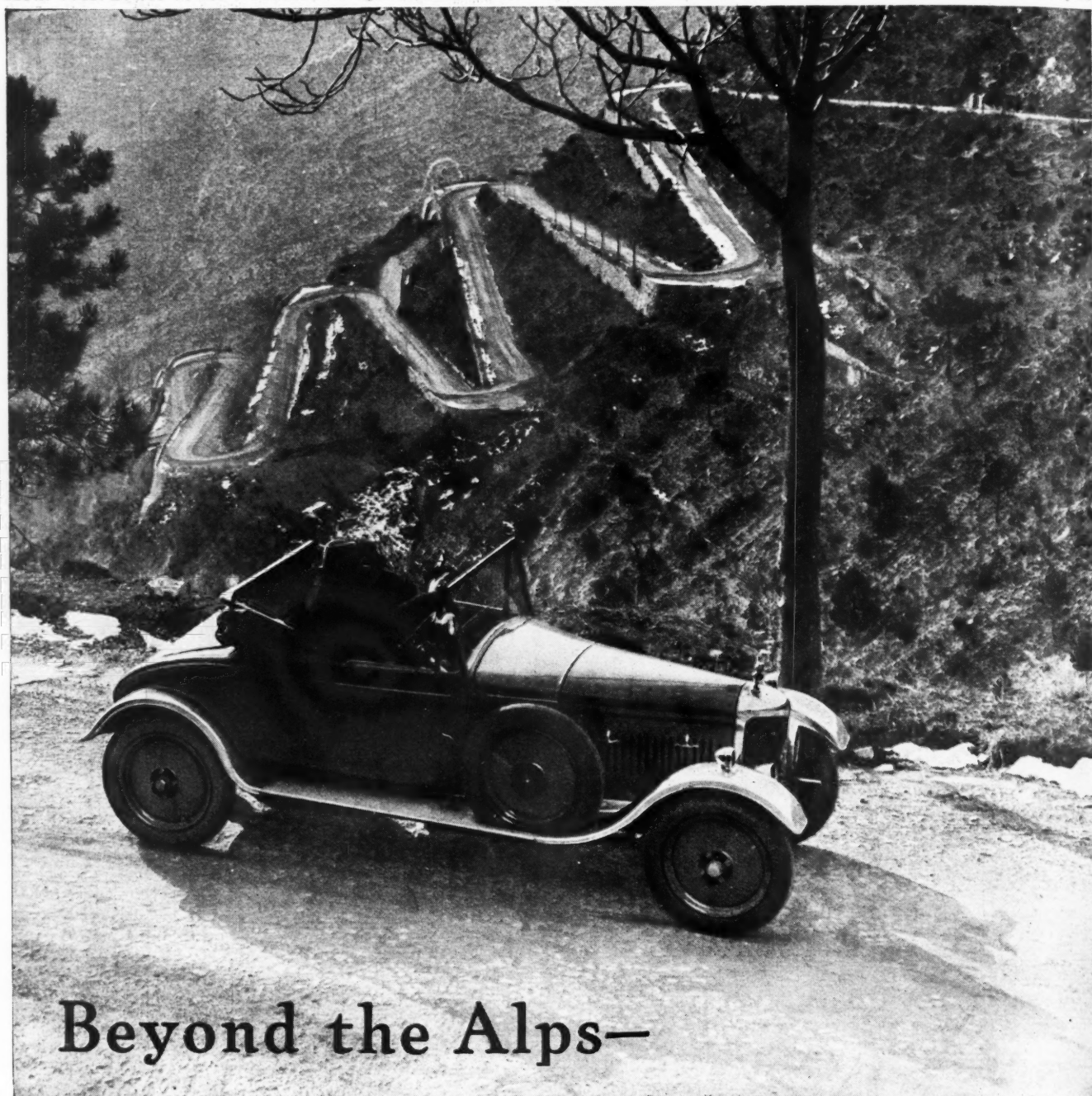


***B**ALL BEARINGS are more largely employed than any other type. And New Departure makes more than half of them.*

This consensus of so many technically-trained minds is both impressive and significant.

**New Departure
Ball Bearings**

Hon. V. A. Bruce in his victorious 6-cylinder A-C on the famous Col-de-Braus, en route from Lucerne to Sospel



Beyond the Alps—

Here early Greeks and Napoleonic armies surged with the tides of conquest. Here an A-C motor car, of English manufacture, equipped with Timken Tapered Roller Bearings, conquered all competitors in international road racing and hill climbing contests.

The hair-raising, hair-pin Alpine passes, no less than the Pike's Peak highway, know the ability of Timken-equipped cars and buses.

The automotive engineers of Europe, like those of the United States, adopt Timken Tapered Roller Bearings, because there is no other way to comparable endurance, ability, smoothness and economy.

There are Timken Bearing factories in England and in France.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

MOTOR AGE

VOLUME LII

Philadelphia, Pa., Aug. 18, 1927

NUMBER 7

Expect August Will Be Biggest Month

Price Cuts Stimulate Selling and Production Gains Appreciably

NEW CAR STOCKS LOW

NEW YORK, Aug. 17—Production of motor cars has been accelerated rapidly in the last few weeks and indications are that the August total will be close to the highest mark of the year for the companies exclusive of Ford, if, indeed, the best previous months of 1927 is not exceeded.

The stimulus given by recent price cuts and the introduction of new models is being clearly felt, and though in the lower prices ranges there is some hesitancy to buy pending the announcement of the new Ford model, this has not seriously affected most of the companies producing cars at \$1,000 or less than that price.

The current active production is spread rather generally and all but a small minority of the companies are at a better rate than a year ago. Prices of course are lower and although in units output has been running about 10 per cent over a year ago for the non-Ford companies, dollar volume is little if any ahead. This, however, is by no means entirely due to reduced prices but reflects the big gains made by two or three companies selling in the lower price brackets.

New car stocks are at or only slightly above the low point of the year and used car stocks are in fair condition as dealers in many lines were able to dispose of the second-hand cars while awaiting arrivals of new models.

Brand Leaves Indian

SPRINGFIELD, MASS., Aug. 17—Another change has taken place in the executive personnel of the Indian Motorcycle Co. in the resignation of John Brand, supervisor of control and in charge of production planning, to become assistant factory manager of the Baldwin Chain & Mfg. Co. of Worcester, the concern of which Frank J. Weschler, formerly president of the Indian company, recently became head. Mr. Brand had been with the Indian company eight years, and previously held positions with the Bosch and Westinghouse companies.

Every Vote is a Boost

IN another part of this issue is a vote coupon for use in the jobber salesmen's popularity contest.

That efficient jobber salesman from whom you like to buy deserves his popularity—and it should be rewarded.

Help him win one of the cash prizes, which total \$2,075.00.

The Motor World Wholesale jobber salesmen's popularity contest is going to bring honor and distinction to twenty-seven good men—three in each of the nine trading zones. Retailers and garagemen are asked to help them by clipping their coupons, filling them in and forwarding them to Motor World Wholesale.

There is a voting coupon in this issue. Fill it in promptly.

General Motors to Split Common Stock

Rearrangement of Shares Will Be Voted on Sept. 1 By Stockholders

ACT SHOWS STRENGTH

NEW YORK, Aug. 15—It is generally expected in the financial district that common stock of the General Motors Corp., after the 2-for-1 split-up on which stockholders will vote Sept. 12, will be placed on a regular \$5 dividend basis. This would be equivalent to increasing the regular rate on the present shares from \$8 to \$10 annually.

In addition it is expected that the directors, late this year, will authorize an extra dividend on the increased number of shares which will be outstanding after the approval of the stockholders to the split-up.

For the first six months the corporation reported net profits equal to \$14.35 a share on the present 8,700,000 shares of common. It is believed, therefore, that the full year's earnings should be about \$25 a share, which on the basis of the corporation's policy of distributing 60 per cent of its earnings in dividends means that a total of \$15 a share should be paid this year on the present capitalization.

If, therefore, the regular dividend is \$5 a year on the increased number of shares presently to be outstanding, there would be indicated a regular dividend of \$1.25 and an extra of \$2.25 to be declared on 17,400,000 shares in the final quarter.

The action of the directors last week was considered to indicate their confidence that the corporation's earning power has been built up to a point where a regular dividend of \$5 can be maintained at all times on double the number of shares now outstanding.

Hyman to Leave McKee

INDIANAPOLIS, Aug. 17—Herbert R. Hyman, for many years well-known in the automotive industry through his connection with the Cole Motor Car Co. and the Stutz Motor Car Co. of America, Inc., and who in late years has been identified with the Homer McKee Co., advertising agent of this city as vice-president, has just been appointed director of merchandising of the Keystone Knitting Mills, Ltd., of London, England, and will leave for Europe soon to take over his new duties.

Daily Output of New Dodge Exceeds 1000

DETROIT, Aug. 17—Production of Dodge Brothers' new four-cylinder car is being stepped-up this week to more than 1000 units daily, marking an advance in the schedule of approximately 25 per cent from last week's level of 800 daily. It is stated that production has been running behind sales since the new four was introduced July 17 and that dealers' stocks are unusually low.

To date the only car introduced in the new line of fours is the sedan. A new coupe has now entered production.

Jordan Motor Car Co. Earns Profit of \$86,773

NEW YORK, Aug. 17—Jordan Motor Car Co. reports for quarter ended June 30, 1927, net profit of \$86,773, after depreciation, charges and federal taxes, equivalent after allowing for 7 per cent preferred dividend requirements to 56 cents a share earned on 126,000 shares of no par common stock.

Durant Off to Europe

NEW YORK, Aug. 17—William C. Durant will sail for Europe on Aug. 20 on an extended vacation. The trip was planned several months ago but was deferred because of Mr. Durant's plans for an expansion of his interests.

Oldest Ford Dealer Has Sold 100,000

W. L. Hughson, N. A. D. A.
Head, Has Averaged 5000
Sales Per Year

SAN FRANCISCO, Aug. 17—From a hat salesman at \$10.00 a week to one of the largest automobile distributors in the world and a director of one of the country's large western railroads—from the sale of 14 automobiles the first year he was in business, to a record of 5000 cars each year for the past 20 years.

Such is the career of William L. Hughson, Ford automobile dealer in San Francisco. Incidentally, Mr. Hughson enjoys the distinction of being the oldest Ford dealer in the United States, if not in the entire world.

"You know," said Mr. Hughson, "when I started in the automobile business it took a lot of nerve. A fellow had to figure on having his capital tied up for some time. I never allowed that to worry me, however, for if I had, I would have been out of business at the end of the first year.

"Back in 1902 the future of the automobile and the opportunities connected with it began to interest me. At that time the automobile was, of course, still very much of a novelty. Would you believe it, various towns in California passed laws forbidding the operation of automobiles? The person who was driving one was forced to stop when he saw a horse-drawn vehicle approaching, and woe be to him who did not observe this rule. Well, I had a little money to invest, and decided that I would put it in automobiles. That was in March, 1903. There were not very many cars manufactured in those days, and after a careful survey of the field, the Ford car looked the most promising to me. I have never yet had occasion to change my mind.

"My next move was to get a good location, so I hired a vacant store at Market and Oak Sts. I then placed my first order with the Ford Motor Company. It called for two carloads which totaled 14 cars. Obtaining the machines was easy—disposing of them was something else, however. I had those cars on my hands for a whole

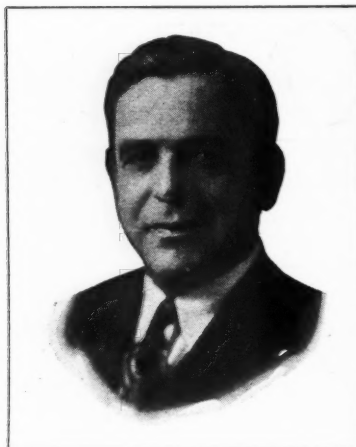
(Turn to page 12, please)

Made Olds Distributor

SPRINGFIELD, MASS., Aug. 16—Oldsmobile Springfield Co. has been appointed distributor of Oldsmobile for this county and an adjacent section of Connecticut. James C. Byrnes, formerly sales manager for the Young Motor Co. of this city, is manager.

Chevrolet Dealers Meet

KEOKUK, IOWA, Aug. 17—A score of Chevrolet salesmen and dealers in this vicinity were guests at a dinner



William L. Hughson

William L. Hughson, president of N. A. D. A., oldest Ford dealer, whose sales for 20 years total 100,000 units

at the Y. W. C. A. last week, launching the nation-wide "Round the World" sales flight. M. J. Paydon of the company detailed the plan of the sales campaign which started this month and continues through September. The Monroe Motor Co. was host.

Motor Trunk Co. Forms Hassler-Michigan Sales

DETROIT, Aug. 17—Motor Trunk Co., manufacturer, has organized the Hassler Michigan Sales Co. for distribution of Hassler products in 12 counties of southeastern Michigan, including the Detroit territory. Brady Bradbeer is president of the Motor Trunk Co.

Arsdell Promoted

ATLANTA, Aug. 18—L. J. Van Arsdell, who has been one of The Simplex Piston Ring Co. of America, Inc., general territory men, has just been appointed manager of the southeastern territory with headquarters in this city. Mr. Van Arsdell's territory comprises the States of Georgia, Florida, Mississippi, Alabama, Tennessee, North Carolina and South Carolina.

*Use the handles to
open doors. Gee! maybe
that's what the factory put
them there for.*

Flat Rate Red



Howard Crawford Addresses Dealers

Pines Winterfront Preseason
Meeting in Philadelphia
Attended by 30

PHILADELPHIA, Aug. 15—Thirty Pines Winterfront dealers attended a preseason convention, sponsored by Herman Shade, local distributor and held at the Penn Athletic club, last week. Howard Crawford, vice-president and general sales manager of the company, came down from his summer camp in Northern Michigan to address the dealers.

That the dealers look forward to a substantial increase in Winterfront business over last year was evidenced by the increase in the contracts for their season's requirements and by their wholehearted cooperation in all forms of local advertising.

Among those who were present at the convention were; Ed Steinhart, Steinhart Auto Supply Co., Shamokin, Pa.; Elmer Wood and Charles Goldberg, Camden Storage Battery Co., Camden, N. J.; Lloyd R. Remington, Gabriel Snubber Sales and Service, Allentown, Pa.; L. B. Richardson, Harrisburg, Pa.; Ray Stauffer and Mr. Schaeffer, Automobile Supply Co., Hazleton, Pa.; Leon Beam, Kitsee Auto Stores, Wilkes-Barre, Pa.; Richard Jackson, Sanford Motor Supply Co., Williamsport, Pa.; F. M. Trout, Carlisle, Pa.; Charles Ward, West End Garage, Chester, Pa.; James Risley, Automotive Electric and Battery Co., Atlantic City, N. J.; Fred Way, Way Brothers, Easton, Pa.; Frank Scharlach, C. H. Flory and Frank Crane, Scranton, Pa.; Cooper Tower, Tower Lennox Co., Trenton, N. J.; W. R. Strunk, Mr. Davis and John Wright, W. R. Strunk Garage, Reading, Pa.; Ammon Stahl, Willard Battery Service, Lansdale, Pa.; Mr. O'Dell and Mr. Swab, O'Dell and Sweeney, Pottstown, Pa.; Earl Mylecraine, Philadelphia, Pa.; J. Meany, Conshohocken, Pa.; Mr. Bartle, Bartle Auto Supply, Rosemont, Pa.; M. J. Cullinan, Philadelphia, Pa.; J. A. Bickel, Garage Supply and Equipment Co., Philadelphia, Pa.; Charles I. Engard and Joseph Fredericks, H. P. Schade Co., Philadelphia.

Bean Joins Simplex

CLEVELAND, Aug. 17—B. Bean has joined The Simplex Piston Ring Co. of America, Inc., as road salesman, working out of Cleveland. Mr. Bean was formerly connected with The Well-Ever Piston Ring Co.

Hunt & Co. Has New Home

DALLAS, TEX., Aug. 16—A new home for Hunt & Co., auto accessory and parts dealer, is being erected at the corner of Live Oak and Good Streets.

Paige Co. Organizes Export Department

New Company Will Handle Projected Expansion of Overseas Trade

DETROIT, Aug. 17—Paige-Detroit Motor Car Co. has organized Paige Motors International Corp. under New York State laws for the handling of Paige export business in all foreign markets. The new company, stock in which is entirely held by the Paige-Detroit Motor Car Co., will be a sales organization and the vehicle for a projected expansion of the Paige export business.

Robert C. Graham, vice-president of Paige-Detroit, has been made president of the new export company. John D. Biggers, of Graham Brothers Corp., is vice-president, and Walter E. Morrison, hitherto export manager of Paige-Detroit, is secretary and treasurer. William A. Graham and Ray A. Graham, together with the officers, are directors of the corporation.

Officers of Paige Motors International Corp. are at 1 E. Forty-fourth St., New York City, and Mr. Biggers and Mr. Morrison will make their headquarters there.

Although the corporation now is pursuing with little change the policies and procedure of the Paige export business as formerly conducted, plans are being formulated for an aggressive pursuit of foreign business which will involve some departures from precedent. These plans are necessarily withheld from announcement for the present.

Powell Sales Manager

SEATTLE, WASH., Aug. 17—W. G. Powell is sales manager for Rowland & Clark, Seattle, distributor of Auburn cars for western Washington.

Mr. Powell has been identified with the automobile business in Seattle for eight years. In 1922 he became sales manager of the Gardner organization, Mitchell, Lewis & Staver, former distributors, and afterward he held the same position with the Raynor Motor Co.

Olson Goes to Detroit

MILWAUKEE, Aug. 16—Charles G. Olson, formerly of the main office of the Chain Belt Co., has been transferred to the Detroit office. Mr. Olson was connected with the sales department for several years before his transfer. He will look after the Rex chain and engineering business of the company in Detroit territory with headquarters at 8855 Woodward Ave.

Durfee Sales Engineer

NEWARK, Aug. 18—C. G. Durfee has resigned as a member of the staff of the Society for Electrical Develop-



Peerless Names Two Branch Managers

Appointments of two new branch managers at important points were recently made by Peerless Motor Car Co. J. G. Reynolds, left, succeeded R. M. Mosher at Detroit and W. L. McCutcheon succeeded Bruce Livie at Washington

ment to take a position as sales engineer for the Pyrene Mfg. Co., in connection with its latest foam system of fire prevention.

Rengers Back as Moon Sales Chief

ST. LOUIS, Aug. 17—After conducting a nine months intensive survey of conditions in the Chicago district, including Wisconsin, and during which time he was in charge of Moon headquarters in Chicago, F. H. Rengers has returned to the Moon plant and has again taken up his duties as general sales manager of the company.

During the nine months in the Chicago territory Rengers availed himself of the opportunity of studying the dealers' problems at close range as he traveled over the territory. As a result, he has come back to the factory with a wealth of definite ideas relative to closer cooperation and better understanding between the Moon dealer organization and the factory.

"The outlook," said Rengers "for the automobile business for the next five months is exceedingly encouraging despite the drawbacks visited upon the industry during the past several months, and I say this after a careful study of actual conditions in the field, a study which brought me into close contact with many dealers and their problems."

Albertson Adds to Plant

SIOUX CITY, IOWA, Aug. 17—Albertson Co. has announced plans for the construction of a \$100,000 addition. The new plant will be 50 x 140 feet, four stories high, with basement.

Peerless Soon to Announce '28 Line

CLEVELAND, Aug. 17—The Peerless Motor Car Corp. will shortly announce new 1928 models, according to word just received from the factory.

The changes that have been made are said to be refinements for the most part, lower bodies, greater comfort and more luxurious upholstery. New color combinations in duotone lacquer and exquisitely finished hardware of brushed silver are among the improvements that rumor says will be included in the new line.

The Peerless factory has been running at top speed for the past six months, shattering production records, and sales in 1927 are expected to exceed 1926 figures by a wide margin.

White Back from Europe

CLEVELAND, Aug. 12—Windsor T. White, chairman of the board of the White Motor Co., is back in Cleveland after attending the economic congress of the International Chamber of Commerce in Stockholm, Sweden, and visiting France, Germany, Belgium, England, Holland and Norway. "International understanding is greatly on the increase," he said. American highway transportation, Mr. White said, is many steps ahead of the European.

Powell Sells Auburn

SEATTLE, WASH., Aug. 16—W. G. Powell, prominent in automobile circles here since 1919 is now associated with Rowland & Clark.

Davies in Whippet Makes Speed Record

Sets Official Speed Mark in
Kansas City-St. Louis
Time Trial

KANSAS CITY, Aug. 16—Harry Davies, a registered A.A.A. racing driver, has set a new official speed record between Kansas City and St. Louis. Driving a stock Whippet 4 roadster over U. S. Highway No. 40, Davies made the run in 4 hours and 25 minutes. He was compelled to make two detours on the route that delayed him several minutes.

Davies was checked out at the city limits of Kansas City by an A.A.A. official at 11.30 p. m. and was checked in at the city limits of St. Louis at 3.55 a. m. The distance was 248.4 miles and the average speed was 54 miles per hour.

The run was sponsored by the Holzmarm Motor Co., Whippet-Willys-Knight distributor for Kansas City.

100,000 Fords in 20 Years Sold by Hughson

(Continued from page 10)

year. Believe me, it took some salesmanship to put over an automobile sale in those days.

Fear, Greatest Obstacle

"Fear was the greatest obstacle to overcome. Many persons were really afraid to ride in automobiles. They were afraid something might happen, they did not know what it would be, but anyhow they were not taking any chances. This condition existed for several years. Sales showed a slight increase each year, but it seemed as though the pioneering days would never end."

Mr. Hughson never for one moment

doubted that the automobile would some day revolutionize American industrial life and the everyday living of the average American. His predictions were the cause of many a heated argument. Men prominent in the direction of large industrial concerns scoffed at his ideas. Bankers laughed at his arguments. Overnight, however, Mr. Hughson's convictions were demonstrated. The automobile showed, in a thousand ways, its adaptability for any duty it might be called upon to perform.

On the morning of April 18, 1906, San Francisco was rocked by a terrific earthquake. Fire broke out in many parts of the city. Street car transportation was demoralized. Horses were not equal to the tasks they were required to perform during the emergency. Automobiles were pressed into service for the thousand and one things that required immediate attention. In the days and weeks of confusion that followed, automobiles were used for the transporting of food, medical supplies and other urgent necessities.

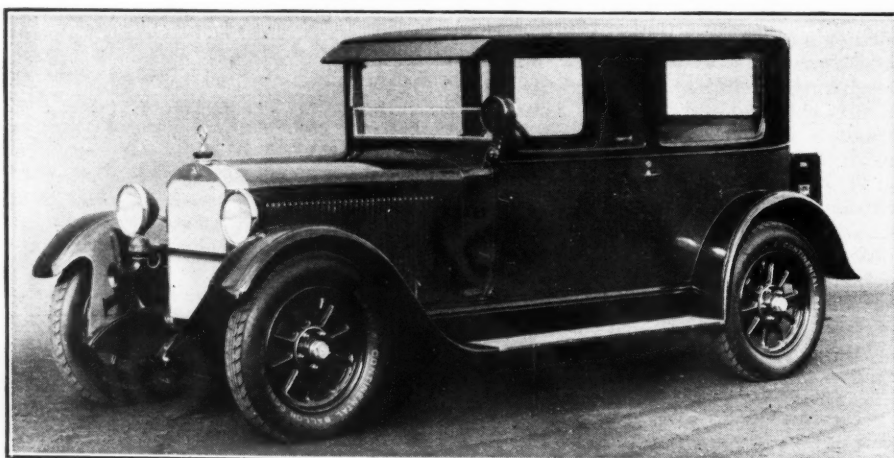
"From that time on," Hughson declared, "the sale of automobiles increased by leaps and bounds. Their worth had been proved."

During his 25 years' association with the Ford Motor Co., Mr. Hughson has developed a strong friendship with Henry Ford, and he tells numerous interesting stories relating to his association with Mr. Ford.

Mr. Hughson is one of the best known automobile men in the United States. He is president of the National Automobile Dealers Association and has been a member of the board of directors since its foundation a number of years ago.

Piersol Consulting Engineer

PITTSBURGH, Aug. 17—Robert J. Piersol, formerly research engineer for the Westinghouse Electric & Mfg. Co., is now a consulting engineer specializing on the installation and operation of chromium plating. His address is 3617 Dawson St., Pittsburgh, Pa.



The Mercedes-Benz

Country-wide dealer distribution of this small six-cylinder Benz is planned by the Mercedes-Benz Co., Inc., of New York. The car, which is said to give 25 to 28 miles to the gallon, sells from \$3,300 to \$4,200

Townsend-Chrysler Win Speed Classics

Automotive Manufacturers' Motor Boat Entries Take Prizes

NEW YORK, Aug. 15—"Greenwich Folly," owned and driven by George Townsend, president of the Moto Meter Co., was the winner of this year's Gold Cup Race for the second year in succession. "Miss Columbia," owned by the Columbia Yacht Club, and driven by Charles Chapman, was the only other boat to finish in this race. These two boats were the only two entries in the class equipped with the Moto Meter self-adjusting spark plug, starting and finishing the race on the original set of plugs without any changes.

In the Rainbow Class, "Scalawag," owned by Walter P. Chrysler and driven by Tobey Coutre, and equipped with one of the new Chrysler Imperial 80 Red Head motors, scored a decisive victory. In the Baby Biscayne Class, "Bella V," also owned by Walter P. Chrysler and driven by Walter P. Chrysler, Jr., captured first place. Both these boats were equipped with Moto Meter self-adjusting spark plugs.

The winner of the 151 cu. in. non-supercharger race was "Miss Ricochet," owned and driven by R. H. Moeller. "Zelli," owned and driven by B. O. Cunningham, won the Baby Car Junior stock runabout race. These victorious boats were also equipped with Moto Meter self-adjusting spark plugs.

The advent of the Moto Meter Co. into the racing field with this new product was one of complete success, and is causing a considerable amount of favorable comment in engineering circles.

The Gold Cup Regatta has been a great help in developing some of the more notable improvements in the motor industry. It has become a practical proving ground which has had much to do with the remarkable development and success of such products as Ethyl gas and Moto Meter self-adjusting spark plugs.

Chevrolet Production to Date Exceeds 1926 Total

DETROIT, Aug. 17—Total production so far this year, at the plants of the Chevrolet Motor Car Co. yesterday exceeded the total 1926 production by 1273 cars. Total 1926 production was 732,147 units, and yesterday's production brought the 1927 total so far, up to 733,420 units.

Brewer Bros. to Build

GREAT BARRINGTON, MASS., Aug. 17—Brewer Bros., Reo dealers in Pittsfield, have purchased a site and will erect a branch sales and service establishment in this town.

Battery Distributors Fight Price-Cutters

Los Angeles Dealers Join in
Campaign to Educate
Car Owner

LOS ANGELES, Aug. 16—Southern California battery distributors are adopting definite methods to combat the competition of chain store companies and local branches of Eastern mail order houses which sell batteries at cut-rate prices, but offer no after-sale service facilities.

One of the largest local battery distributors recently instituted a plan providing for a charge of 25 cents to be made by its dealers for service on any battery sold by a company not maintaining a service organization. Heretofore free battery service to all has been the rule. Other battery distributors are joining in the campaign to educate the car owner to the importance of purchasing his battery from a dealer who is prepared to give him service.

"In the past when a customer asked the cut-rate house where he would receive battery service, he was told to go to any independent dealer," says a Los Angeles distributor. "The result was that our dealers were investing much of their time servicing the batteries of their cut-rate competitors, who have shirked all after-the-sale responsibility. We felt that this situation was entirely unfair, and have proceeded to correct it."

Sloan and Party Visit New Departure Mfg. Co.

MERIDEN, Conn., Aug. 15—Pres. Alfred P. Sloan, Jr., and six members of the executive committee of the General Motors Corp. were recent visitors at the New Departure Mfg. Co. plant. In the party besides Mr. Sloan were Donaldson Brown, John L. Pratt, John J. Raskob, Fred J. Fisher, Charles T. Fisher, and Lawrence P. Fisher. W. A. Fisher and Edward R. Stettinus were also in the party.

They were met by Pres. DeWitt Page of New Departure, division manager Charles M. Gearing and vice-president Frederick G. Hughes.

Has Successful Exposition

ONSET, MASS., Aug. 16—More than 15,000 people attended the annual Cape Cod automobile and trade exposition which was held here during the past week. It was one of the largest of its kind on Cape Cod and there were more booths and automobiles displayed than in a number of regular winter automobile shows.

Banta Takes on Vesta

LOS ANGELES, Aug. 17—The Banta Company, Los Angeles general line jobbing house, has taken southern California distribution for the Vesta battery.

We Tip Our Panama to G. E. Lantz, of Boston

WE take this public means of expressing our thanks and appreciation to G. E. Lantz, of Henshaw Motor Co., Boston, Mass., for a list of five questions and answers submitted for the weekly quiz in MOTOR AGE. Three of Mr. Lantz's questions are included below. We are not permitted in this introduction to mention the name of the car handled by the Henshaw Motor Co., because that information would reveal the answer to one of the questions.

How about you? Haven't you some questions that you would like to see on this page? Send 'em along and we'll print 'em if they are of general interest to our readers. First get your questions AND answers together, mail them to us and then try your skill at the following quiz:—

1. Fill in the missing word in the slogan, "_____ is never seen, except on goods of honest value."
2. What prominent automobile manufacturing company has dealers on its Board of Directors? (Submitted by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)
3. What happens to the timing of the ignition and valves when a timing chain wears?
4. What effect will slack in a timing chain have on engine operation at low speed?
5. What effect has poor ignition wire on the operation of an engine, and what other items are also affected?
6. Is a lubricating oil permanently thinned out by heating?
7. Approximately how many parts are there in the average automobile built by the leading manufacturers? (Submitted by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)
8. Is aluminum an alloy or a base metal?
9. After whom was the first long-distance American automobile reliability tour named? (Submitted by G. E. Lantz, Henshaw Motor Co., Boston, Mass.)
10. What is the most interesting business weekly circulating in the retail automotive trade?

ANSWERS TO AUG. 11 QUESTIONS *

1. "Let Your Next Car Be Chandler" is a slogan used by the Chandler-Cleveland Motors Corp.
2. The initials "C.C.J.Co." mean Chilton Class Journal Co., publishers of MOTOR AGE and other automotive business publications.
3. Electrolyte as used in storage batteries is a mixture of chemically pure sulphuric acid and distilled water.
4. In preparing electrolyte care must be used to see that the acid is poured into the water—never the water into the acid. The reason for this is that heat is generated when the two are mixed and the solution may splatter if the proportion of acid to water is too great. Also this mixture should be made in a lead or glazed porcelain container.
5. A battery should be removed from a car and recharged when the gravity shows 1.125 or when the voltage of each cell is down to 1.7 volts when tested with a voltmeter that has a high rate shunt so that the cell is being discharged.
6. An engine will frequently start with the hand crank when the battery is so low that the starter will barely crank the engine, because then all of the energy of the battery is available for ignition. Battery voltage will frequently drop to 3.5 volts when the battery is low and the starter is used, and this does not provide a good spark.
7. Twenty-seven national automobile shows have been held in Chicago.
8. There are approximately 85,000 automobile repair shops in the United States.
9. Wages in motor car and truck factories in 1926 amounted to \$657,724,859.
10. (a) The automobile dollar of 1914 is worth \$1.13 today. (b) The cost-of-living dollar of 1914 is worth 60 cents today.

* These answers are not guaranteed to be correct, but are obtained from sources we believe to be reliable.

Harley Earl Forms New GM Division

DETROIT, Aug. 16—Harley Earl, formerly body designer and consultant of Cadillac Motor Car Co., is organizing a division on designing arts and color to act in an advisory capacity for all automobile divisions of General Motors Corp. A special Cadillac sport phaeton, designed by Mr. Earl, was awarded first prize at an international automobile contest for efficiency and beauty of appearance recently held in Berlin, Germany, with the second prize going to LaSalle.

Willys Earns \$5,238,053

NEW YORK, Aug. 17—Willys-Overland Co. and subsidiaries report net profit for six months ended June 30, 1927, as \$5,238,053 after charges and federal taxes, equal after preferred dividends to \$1.83 a share (par \$5) on 2,526,362 shares of common stock against \$7,423,388 or \$2.68 a share on 2,527,051 common shares in first half of 1926.

Dunlop Service Manager

DETROIT, Aug. 15—Alex Dunlop, who worked with Henry Leland 27 years ago on motor boats and was with Mr. Leland when the latter first brought out the Lincoln car, has taken charge of the Lincoln service department of Universal Auto Co., Spokane, Wash.

Takes on Nash Line

SAN FRANCISCO, Aug. 17—Butler-Veitch, Inc., for many years Marmon dealer in San Francisco, has been appointed metropolitan dealer for the Nash, according to announcement by Carl J. Simpson, vice-president and general manager of the Pacific Nash



Dreves With Oakland

Louis M. Dreves, who has joined Oakland Motor Car Co., as special sales representative in the Pacific Coast and Rocky Mountain territories

Motor Co. Butler-Veitch will continue also to handle the Marmon and the little Marmon.

Chandler Totals Show Increased Production

CLEVELAND, Aug. 18—July production of Chandler-Cleveland Motors totaled about 2000 units against 1200 in July, 1926, and compared with shipments of 1500 in June and 3366 in May. Production for the first half was 15,803 against 11,800 for the corresponding period last year.

Traffic Separation Urged by Jordan

NEW YORK, Aug. 17—There were 590 motor fatalities in cities of more than 100,000 population in June as against 525 in June, 1926, and 542 in May, 1927, according to the National Automobile Chamber of Commerce. During the first half of the year deaths from motor accidents in these cities were 3001 against 2650 for the corresponding period of 1926.

In a statement accompanying the report, Edward S. Jordan, representing the Street Traffic Committee of the Chamber, declares that signal lights cannot move traffic at its peak in the larger cities satisfactorily, and makes a plea for more general adoption of grade separation, whereby traffic is carried over or under an important intersecting highway.

Norwalk Tire Nets \$33,323

NEW YORK, Aug. 12—Norwalk Tire & Rubber Co. reports for quarter ended June 30, 1927, net profit of \$33,323 after expenses, interest and depreciation, equivalent after 7 per cent preferred dividend requirements to 8 cents a share (par \$10) earned on 150,000 shares of common stock. This compares with net loss of \$46,953 after above deductions in preceding quarter. Net loss first six months of 1927 totaled \$13,630.

Trade Show for Ottawa

OTTAWA, ONT., Aug. 17—An important trade development was the recent decision by the local automobile trade to have a motor show at the Central Canada Exhibition, Ottawa's annual fair, to be held August 22 to 27. This will precede the National motor show at the Canadian National Exhibition, Toronto, by one week.

What's Coming in Motordom

SHOWS

Automotive Equipment Association, Coliseum, Chicago Nov. 7-12
Baltimore Jan. 21-28
Brooklyn, Brooklyn Motor Vehicle Dealers Association Jan. 21-28
Buffalo Jan. 14-21
*Chicago, National Automobile Chamber of Commerce, Coliseum, Jan. 28-Feb. 4
Chicago, Chicago Automobile Dealers Association Jan. 28-Feb. 4
*Cleveland, Public Auditorium Jan. 21-28
Columbus Jan. 14-21
*Dallas, Texas, Automobile Building, Oct. 8-23
Denver Feb. 13-18
Des Moines, Coliseum Feb. 20-25
Green Bay, Wis., Auto Bldg., Aug. 29-Sept. 2
Indianapolis Feb. 13-18
Kansas City, Mo., American Royal Bldg. Feb. 11-18
Milwaukee Jan. 14-21
Minneapolis Municipal Auditorium, Feb. 4-11
National Standard Parts Association, Convention Hall, Cleveland, Nov. 14-18

National Tire Dealers Association, Brown Hotel, Louisville, Ky., Nov. 15-17
Newark Jan. 14-21
*New York National Automobile Chamber of Commerce, Grand Central Palace Jan. 7-14
New York, Automobile Merchants Association of New York Jan. 7-14
Pennsylvania Automotive Association, Johnstown, Pa. Sept. 19-20
Philadelphia Jan. 14-21
Rochester, N. Y. Jan. 23-28
Salon, Automobile Salon, Inc., Hotel Drake, Chicago Jan. 28-Feb. 4
Salon, Automobile Salon, Inc., Hotel Biltmore, Los Angeles Feb. 11-18
Salon, Automobile Salon, Inc., Hotel Commodore, New York, Nov. 27-Dec. 3
Salon, Automobile Salon, Inc., Hotel St. Francis, San Francisco, Feb. 25-March 3
Salon, Los Angeles Motor Car Dealers Association, Hotel Biltmore, Oct. 18-21
San Francisco Jan. 28-Feb. 4
St. Louis Feb. 20-25
Syracuse Feb. 6-11

*Will have special shop equipment exhibit.

CONVENTIONS

Automotive Equipment Association, Coliseum, Chicago Nov. 7-12
National Association of Finance Companies, Congress Hotel, Chicago, Nov. 14-15
National Automobile Dealers' Association, Ohio Council, Cleveland, Sept. 14-15
National Standard Parts Association, Hotel Hollenden, Cleveland, Nov. 14-18

S. A. E.

Chicago, October—National Transportation and Service Meeting
New York, Jan. 12—Annual Dinner
Detroit, Jan. 24-27—Annual Meeting.

RACES

Altoona, Pa. Sept. 5
Atlantic City Sept. 5
Charlotte, N. C. Sept. 19
Detroit Sept. 10
Los Angeles Nov. 24
Salem, N. H. Oct. 12
Syracuse, N. Y. Sept. 3

Reuter Says Olds Will Add Another

Larger Model to Be Added to Oldsmobile Line Early Next Year

DETROIT, Aug. 17—Confirming what has been common knowledge in the trade and industry for some time, I. J. Reuter, president and general manager of Olds Motor Works, let it be known this week that a new and larger car will be added to the Oldsmobile line early in 1928. As the present line will be continued, Olds will be the third General Motors division in recent times to add another car in a different price class so as to give dealers a more diversified line.

The recently announced \$3,000,000 expansion program of Oldsmobile will provide facilities for production of the new car as well as a larger output of the Oldsmobile Six. Contracts have been let for the greater part of the work, the program including a second engine plant which will adjoin and duplicate the present engine plant of the company. Indications are that this new building will turn out the engines for the new car.

Details regarding the new car are not available at this time, but it is known that Olds officials and engineers have been working on the addition to the line for a long period and that experimental cars have been driven hundreds of thousands of miles on the General Motors Proving Grounds under all possible conditions of road and weather.

Opens Portland, Me., Office

DETROIT, Aug. 17—Creation of a new Chevrolet zone sales office, the twentieth to be opened since 1925 and the forty-third now established in the United States, more than half of which have parts distribution depots providing the public with quicker and more efficient service, was announced today by H. J. Klingler, general sales manager of the Chevrolet Motor Co.

The new zone, located at Portland, Me., is the ninth to be established since the first of the year, according to Mr. Klingler, others having been opened at Columbia, S. C.; Salt Lake City, Utah; Richmond, Va.; Butte, Mont.; El Paso, Tex.; Charleston, W. Va.; Wichita, Kan., and Seattle, Wash.

Newton Joins Chain Products

CLEVELAND, Aug. 15—R. H. Newton has been appointed factory representative of The Chain Products Co. in New England and portions of New York, West Virginia and general line of automotive accessories.

Mr. Newton for three years was southern district manager in the accessory division of Gates Rubber Co. of Denver.



THE traffic cop on duty at Main and Spring Streets gave Jim Brown's wife the bawling out of her life. "Either get the brakes on that Awful Eight tightened



or ride a velocipede," he told her. And because she didn't want to make herself ridiculous by doing the latter, she went to Johnson & Co., the dealer from whom the car had been purchased to see what could be done.

Nobody paid much attention to her after they found she already had an automobile. Finally, after a half hour she got action. A chap with a cigar told her to drive around to the back and ask for Eddie. She did. But Eddie wasn't in. Somebody who was pinch-hitting for him told her to come for the car in two hours. She did. But the brakes hadn't been touched. She was sore. Nobody in that "service" station appeared to have any time for a car that had been safely sold.

Six hours later she drove the car home. And when she got out of it she had the print of a greasy wrench, low down on the back of her dress. Thank Gawd it was a wash silk and the laundress was coming tomorrow. She knew she had been sitting on something, but woman-like, hadn't stopped to investigate. Anyway, she was a wrench to the good.

And that is why Jim Brown bought a Silent Six for his next car. Mrs. Brown says the new car isn't quite as peppy as the old one. But, as she so often tells the girls at the Country Club lunches, one isn't buying a car so much as one is buying transportation. And the Awful Eight people certainly didn't have any time for you, once they had your name on the dotted line. But the Silent Six dealer was different. He spent the most of his time in the service station, keeping his customers pleased. And he sold a raft of automobiles.

Jim Brown's wife is one of his "salesmen." She doesn't know it. But she's already sold five cars for him to her women friends. He has lots of others like her.

R You should always know what's going on in your back room. Your service station should be an asset to your salesroom, not a liability.

Old Doc Turnover B. D.

(Business Doctor)

Morris Back from Coast

BRIDGEPORT, CONN., Aug. 16—W. J. Morris, vice-president of American Chain Co., Inc., has returned from an extended trip to the Pacific Coast, during the course of which he visited distributors in leading cities.

Ford's Dealers to Sell Planes—Mayo

Chief Engineer Says Eventual Distribution Will Be Same as Cars

DETROIT, Aug. 17—Ford airplanes will eventually be sold through the Lincoln dealer organization and probably through some Ford dealers. William B. Mayo, chief engineer of the Ford Motor Co., said today in an exclusive interview with a representative of MOTOR AGE.

Mr. Mayo's announcement came in the course of a conversation dealing with what he considers an inevitable tie-up between the automobile and aircraft industries.

"It will be easier to distribute planes through established channels rather than to build up new dealer organization," Mr. Mayo declared. "The automobile salesman is fully capable of handling the sale of airplanes with a little additional training, and therefore, a separate sales force in the dealer establishments would not be necessary.

"Development along these lines only awaits the quickening of public demand for air travel," Mr. Mayo continued. "Of course widespread distribution will be mainly in the smaller ships; large transports will probably continue to be sold direct by the factories."

The Stout Metal Airplane Division of the Ford Motor Co. will soon start production of a single-engined, five-passenger, closed-cabin, all-metal monoplane.

To Make "York" Tire

COLUMBUS, OHIO, Aug. 17—The Lancaster Tire & Rubber Co., operating a tire plant in Lancaster, Ohio, and having general offices in Columbus will soon put on the market a new line of tires, moderately priced, under the trade name of "York."

The new line is to be produced in both high pressure and balloon types in sizes up to 33 by 4 in high pressure and up to 31-525 in balloon casings.

Lange Motors Enlarges

DULUTH, MINN., Aug. 17—Additions to its plant which will result in one of the most beautiful showrooms in this region, are being made by the F. H. Lange Motors Co., retailer and distributor of Reo products in Northern Minnesota and Wisconsin. The work will not be completed for several weeks, but at that time the Lange building will have a salon of 6000 feet floor space.

Anderson Distributes Dunlop

HOUSTON, TEX., Aug. 16—Sterling D. Anderson, has been named distributor for Dunlop tires. The Sterling company will have charge of distributing Dunlops in 40 counties.

New Ford Driven at 65 m.p.h. Says Edsel

Car Exceeds Expectations —
Work of Retooling Factories Nearly Done

DETROIT, Aug. 17—Edsel B. Ford, president of the Ford Motor Co., states that the new Ford automobile is now an accomplished fact.

"The engineering problems affecting its design and equipment and affecting also its manufacture have all been solved," said Mr. Ford, "but before a single car of the new type is offered for sale to the public each part will have been tested under every condition which we have been able to discover in more than 20 years of building automobiles for use all over the world.

"We know now exactly what this new car is. We have built a number of these cars and they have been performing even better than we had hoped for under a variety of conditions.

"We know also what is needed as to personnel and factory equipment in order to produce these new Ford cars in greater numbers than any manufacturer has ever attempted before. The work of retooling our plants throughout the country to prepare for the heaviest production schedule we have ever undertaken is now nearly complete.

"But we realize that any new automobile that is to gain and hold public esteem today, whether it shall sell for \$500 or \$10,000, must perform exactly as it is designed to perform. No automobile manufacturer, in this day and time, should allow the public to do his testing and proving for him.

"The building and testing of these first new cars is costing millions of dollars. But it will give us the complete assurance that we are offering the public a car tested and proven as a new car should be.

"Some of the things we have discovered already in the tests of these new cars are interesting.

"We have accomplished with them a speed of 65 m.p.h., which is slightly higher than we had expected.

"We have found that they can be driven for hours at an average speed of more than 50 m.p.h., without discomfort to driver and passengers and without harm to motor and other equipment."

N.H.A. Convenes Oct. 17

PHILADELPHIA, Aug. 15—The thirty-third annual convention of the National Hardware Association of the United States will be held at Atlantic City, Oct. 17 to 20, with headquarters at the Marlborough-Blenheim. Sessions of the accessories branch of the association will be held Oct. 18.

Dillard Forms Company

FORT WORTH, TEX., Aug. 17—The Rodney Crossman interest in the

A Day in the Life of Jimmy Bradford

SAN FRANCISCO, Aug. 17—Asked what he did to keep himself busy all day, James Bradford, bugle-throated champion salesman of the Howard Automobile Co., made the following statement:

"I rises at 5 a. m. I instructs a new Buick owner until 6.30. I teaches another one until 7.30. I has breakfast. I calls on a prospect and takes him to his office. I reports at a salesman's meeting at 8.30. I calls on at least eleven prospects between 9 a. m. and 12 noon, and these visits take me to four suburbs as well as around metropolitan San Francisco. I delivers a talk on 'How Buick Keeps Its New Models Secret Until It Springs 'Em to a business men't club luncheon.

"I reports for floor duty at the salesroom at 2 p. m. There I explains and SELLS new models until 6 p. m. I grabs a bite to eat, if I'm lucky. I talks over the radio until 7.30. I calls on four or five more prospects, and I turns in at 11.30 or later. If you calls that a vacation, I'd hate to have to go to work."

local Studebaker agency has been purchased by Guy E. Dillard and associates and the name changed to the Carroll-Dillard Co. Mr. Dillard formerly was special representative of the Studebaker company, working out of the home office.

Renbold's Motor Boat Seagoing Hupmobile

SAN FRANCISCO, Aug. 15—W. A. Renbold, a Hupmobile owner of this city, has just taken delivery on a 22-ft. motor cruiser, which, with the exception of the hull, is built exactly like a Hupmobile sedan. Controls are the same as on the automobile dashboard, seats are arranged the same, and the four berths fold up, like the extra seats in a car. The boat is of extra heavy construction, designed for deep-water cruising, though smaller than the usual boat intended for that work on this coast.

Franklin Enlarges Store

GREENFIELD, MASS., Aug. 17—Franklin Auto Supply Co., dealer in accessories and parts, has enlarged its store to three times its former space. Branch stores are maintained in Brockton and Plymouth. A. H. Dobbrow is manager of the company.

All Export Records Smashed First Half

\$221,760,753 Worth of Automotive Products Go Abroad in Six Months

WASHINGTON, Aug. 17—All previous records for automotive exports, during any six months period, were broken the first six months of this year, according to revised export figures announced by the Department of Commerce.

Total automotive exports were \$221,760,753. This is a gain of 21.8 per cent over the exports the first six months of last year, which totaled \$182,115,784. Passenger car exports increased 25.6 per cent, amounting to \$117,143,562, compared with \$92,279,339 exported first six months of last year.

Increased exports were recorded in electric trucks, passenger cars, parts of motor vehicles, except engines and tires, motor boats, marine engines and aircraft and parts. Declines were recorded in trailers, automobile engines, motorcycles, cycle parts and aircraft engines. The largest gain was in trucks and buses, showing an increase of 56.1 per cent in value this six months compared with last year's similar period.

Makes Temperature Tests

WASHINGTON, Aug. 17—A series of temperature tests for automobile engines, made by the Bureau of Standards at the behest of the National Automobile Chamber of Commerce, the American Petroleum Institute and the Society of Automotive Engineers, show that a considerable difference in jacket water temperature has but slight effect on car acceleration, but warming the intake manifold helps the engine's ability to pick up speed very naturally.

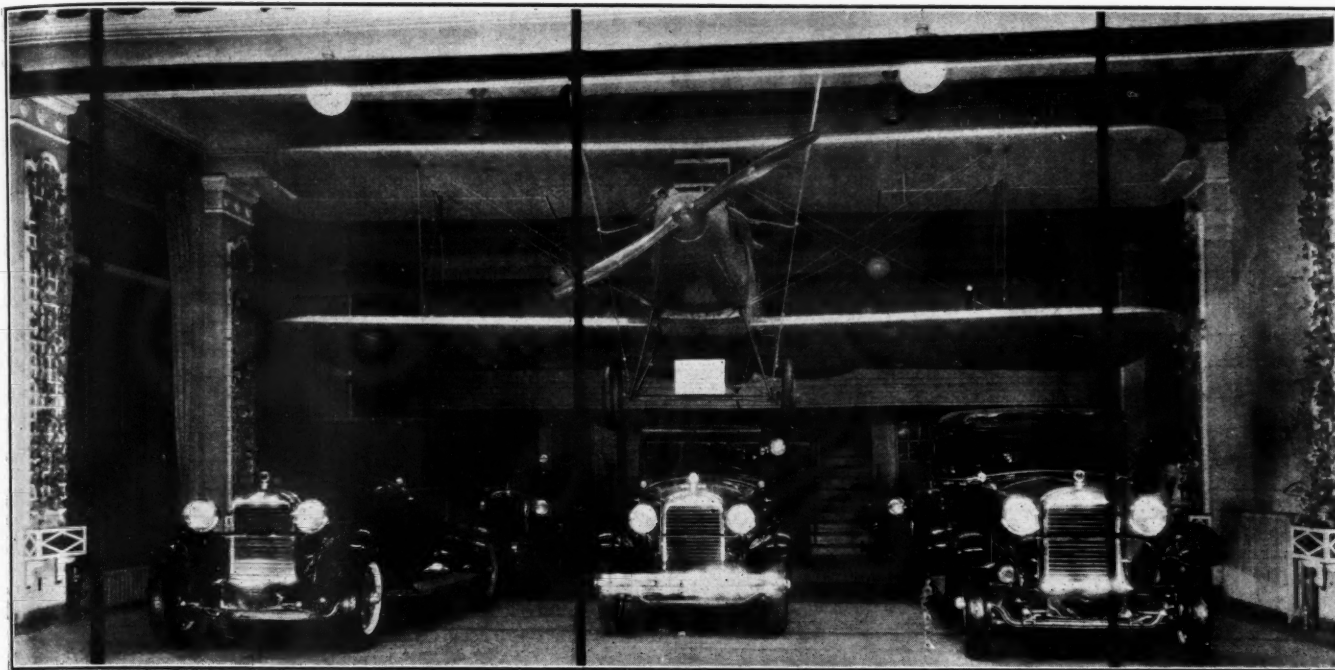
Tests show considerable difference between the performance obtained with different carburetors at normal temperatures.

Green Gas for Panama

WASHINGTON, Aug. 16—All gasoline sold in Panama, henceforth, must be colored green in order to prevent its misuse, the Canal Zones' government has decreed. Experiments in this coloring have been made and it was found that one gallon of a particular dye would color 1500 gallons of gasoline, a suitable shade of green, without changing the quality of the gasoline for automobile consumption.

S. E. Rice Co. Adds Store

ROCKFORD, ILL., Aug. 17—The S. E. Rice Accessory Co., 225 South Main St., has taken a 10-year lease on the adjoining stores at 227 and 229 South Main St., and after Jan. 1, 1928 plans to expand and occupy both stores.



Window Display Number 4

Here is window display number 4, recently used by Walter B. Zimmerman Co., Hudson-Essex distributor, Philadelphia. Last week's, you will remember, showed a window of the Packard Motor Car Co. of New York. It would be hard to equal these excellent windows, but let's look at some from the smaller fellows and see how they shape up. Shoot 'em along—now!

Body Builders Tour Caravan of 28 Units

ST. LOUIS, MO., Aug. 16—A Chevrolet truck caravan of 28 units, each with a different body, all mounted on the standard Chevrolet truck chassis, started from the Chevrolet factory, Union and Natural Bridge, Aug. 15, to make a 2100-mile tour of the St. Louis district, which will occupy six weeks, or until Sept. 23.

The caravan was in charge of H. H. Miller, truck sales representative connected with the St. Louis branch, who acted as pilot, traveling at the head of the procession in a Chevrolet landau.

The trucks were all entered by body builders in St. Louis, each builder providing a driver and salesman for each truck.

An advance man, also in a Chevrolet, will travel several hours ahead of the caravan, working with the dealers in the towns visited to prepare them to make the most of the visit of the caravan to their towns.

Kilbourn in Kansas City

KANSAS CITY, Aug. 17—O. P. Kilbourn, assistant general sales manager of Willys-Overland, Inc., has been on a visit to the factory branch of the company here. He reports the outlook for a big fall business in the middle west as excellent.

Fred Witherow Promoted

SPOKANE, WASH., Aug. 17—Fred Witherow has been promoted to the wholesale department of the Nash Motor Co., to supervise sales in the

western and southern portion of the Inland Empire, was announced recently by Roy E. Dahl, manager of the Spokane Nash Motor Co.

Chrysler "72" Equipped With New Hasslers

INDIANAPOLIS, Aug. 18—Announcement has been made by Guy Lemmon, president of the Hassler Manufacturing Co., Inc., of the adoption of the new Hasslers by the Chrysler Corp. as standard equipment, both front and rear, on the New Illustrious Chrysler "72".

The Chrysler contract is the first of several that Hassler expects to close in the near future. Meanwhile, according to Pres. Lemmon, sales of the new Hasslers through retail channels have shown remarkable growth.

"Brown Brother" Likes to "Drive-Yourself"

WASHINGTON, Aug. 17—The drive-yourself idea is making a big hit with the Philippine automotive using public, according to a report just made to the automotive division of the Department of Commerce. The Department is advised that in the city of Manila alone there are, according to registration figures, 40 garages operating for hire drive-yourself cars, having in operation 600 machines.

1000 Miles in Low Gear in 80-Hour Run

HOUSTON, TEXAS, Aug. 17—Running in low gear and without stopping for 80 hours and 15 minutes, a 9-B Franklin sedan driven by its owner, William Feigel, covered 1000 miles over the local speedway from Thursday morning, July 14, to Sunday afternoon, July 17, breaking all known records for continuous low-gear operation. Time and running conditions were checked by a representative of the A.A.A.

Throughout the run the weather remained warm and sultry and the Houston track was heavy. Speed for the thousand miles was 12.4 miles per hour, an average slightly higher than that made in the 100-mile low-gear run staged in connection with the twenty-fifth anniversary in which 185 Franklin cars chalked up a group average speed of 12 miles per hour.

Timken Earns \$660,011

NEW YORK, Aug. 18—Timken Detroit Axle Co. for the six months ended June 30 reported profits amounting to \$660,011, against \$1,233,059 or \$1.29 a share in the first half of last year.

Association Adds 690

SPOKANE, WASH., Aug. 18—The Inland Automobile Association, Spokane, has increased its membership 690 since the first of January, according to F. L. Crowe, secretary. The total membership now is 2423. The goal of 3000 is planned for the year, said Mr. Crowe.

Sight-Seeing Bus for Pontiac Plant

Visitors to Gigantic Car Factory Now View Operations While Riding

PONTIAC, MICH., Aug. 17—To spare the hundreds of visitors and dealers who daily wish to go through the new Pontiac plant of the Oakland Motor Car Co. the necessity of walking miles to follow all the manufacturing processes, a "sight-seeing" bus service has been placed in operation.

A Pontiac six, with a specially built bus body having a capacity for 12 persons, carries the visitors through the broad aisles. The bus is being run on a regular schedule.

Since this plant has been placed in operation, the number of visitors has steadily increased, drawn by the fact that it is one of the largest plants in the country under one roof and because it is one of the most modernly equipped automotive plants to be seen anywhere, with several new features of building construction and operations.

The bus takes visitors first through the engine manufacturing section, then the car assembly and lastly the car storage. The driver of the car tells of the various operations and stops at processes of unusual interest. Thus the trip which formerly took more than two hours has been reduced to less than a half hour in addition to taking the fatigue out of the trip.

Spokane Business Outlook Is Considered Excellent

SPOKANE, WASH., Aug. 15—The first four days of August have given an impetus to the movement of automobiles from dealers' stocks in Spokane, reports from various representative dealers in this city indicate.

Registrations of new cars totaled 328 for the month of July. A number of dealers report indications that the August movement will be greater and the market stronger because of the wonderful crops in the territory.

Uppercu Opens Branch

NEW YORK, Aug. 17—The Uppercu-Cadillac Corp. announces the opening of an agency in Kingston, N. Y., to be known as Ferguson Cadillac La Salle, Inc. Alexander Ferguson is in charge of the agency, which will shortly have a new building. For the present temporary quarters have been taken in the Governor Clinton Hotel.

Weber-McAllister Join Harrison

SAN FRANCISCO, Aug. 15—The H. O. Harrison Co., Chrysler distributor for northern California, announce that George J. Weber, Chrysler distributor at Fresno, and J. W. McAllister, dis-



Pontiac Plant Has Sight-Seeing Bus

Visitors to the new Pontiac factory, Pontiac, Mich., are taken through the gigantic plant, one of the biggest of its kind in the world, by means of a 12-passenger bus mounted on a Pontiac chassis.

tributor of a popular-priced car, also at Fresno, have been made partners in the company.

McAllister is the son of the J. W. McAllister, who was Harrison's partner in 1906, and continued in the Harrison organization until 1922. Unprecedented increase in sales for the first half of 1927, and prospect of equally heavy, if not heavier, distribution in the second half, are given by Harrison as the reasons for the taking in of the new men.

Modern Auto Painting Is a Book You Should Own

PHILADELPHIA, Aug. 17—"Modern Automobile Painting" is the title of a new book, written by Marvin James Pearce, B. S., and published by David McKay Co. of this city.

The volume covers the subject of automobile finishing and refinishing in a most thorough manner, going into all details from the equipping of the shop to the ways of advertising the business. Problems of refinishing from the bare metal, or over varnish and baked enamel, are dealt with and should be of particular value to those concerned with refinishing used cars.

While the book is very thorough on the subject of refinishing with paint and varnish, it goes into most complete details on finishing cars with lacquer, and hence is a most up-to-date volume.

Found Motor Brokerage Co.

KANSAS CITY, MO., Aug. 17—The Motor Brokerage Sales Co. of Kansas City has been reorganized and incorporated under the laws of Missouri, to handle the repossessions for (12) Kansas City finance companies.

The officers of the company are L. W. Paup, president and manager; J. C. Berry, treasurer, and Joseph Stewart, secretary.

Willys' Half Year's Total is \$5,238,053

TOLEDO, Aug. 17—Net profits of Willys-Overland, Inc., for the first six months this year totaled \$5,238,053 after Federal tax deductions, according to John N. Willys, president. Sales during this period totaled 123,665 cars as against 98,000 in the 1926 period. The sales total exceeds any previous six months' business.

Inventories on June 30, 1927, totaled \$21,058,235 as against \$33,556,118 at the same time last year. Cash on hand totals \$15,552,165 as against \$9,343,539. Rigid control of inventory and economy in operation have combined with a smooth flow of sales to produce a financial position which is not only a source of strength for current operations but a sound fortification in the event of any unusual competitive activity, the statement declares.

Dealer field stocks of cars have been reduced almost 25 per cent in the past 60 days. Branch house stocks have been reduced about 50 per cent in the same period. Stocks of used cars in dealers' hands are declared normal.

Evans in London

NEW YORK, Aug. 18—R. K. Evans, vice-president of General Motors Export Co. and regional director for Europe, accompanied by M. F. Lawrence, manager of the general manufacturing department, sailed July 30 for London.

Opens New Branch

SPOKANE, WASH., Aug. 17—The Transport Motor Co., distributor for Willys-Knight and Whippet, recently opened a branch in Moscow, Idaho. E. A. Ruth, who has been on the sales staff in Spokane, is sales manager.

New Lubrication for Stearns Eight

Principle Used Exclusively on
Knight Car of Recent
Development

TOLEDO, Aug. 17—A new principle of engine lubrication, said to be superior to the "pressure" systems generally in use on cars today, is used on the latest Stearns-Knight 8-cylinder automobiles, according to a statement made recently by H. J. Leonard, president of the F. B. Stearns Co., Cleveland, Ohio.

Positive lubrication is accomplished on the Stearns-Knight eight by having all oil delivered by the pump passed directly into the crankshaft at the rear main bearing where it flows from one end to the other. The surplus oil after passing through the shaft is then sent to the minor moving portions of the engine for their lubrication.

By elimination all by-passes and other leads from the main oil line, there is no possibility for any of the lubricant to escape between the pump and the crankshaft. This arrangement permits a large volume of oil to be introduced into the crankshaft so that positive and direct lubrication for each of the main and connection rod bearings is assured at all times.

Another important feature of this form of lubrication is the cooling effect of the oil on the bearings.

Peerless Motor Car Group Reports \$247,306 Net

DETROIT, Aug. 18—Peerless Motor Car Co. and subsidiaries report for quarter ended June 30 net income of \$247,306 after depreciation, Federal taxes, etc., equivalent to 96 cents a share earned on the 258,589 shares of stock. This compares with net loss of \$168,798 in the preceding quarter and net income of \$694,336 or \$268 a share earned in the second quarter of 1926.

Net income for the first six months of 1927 totaled \$78,508 after above charges, equal to 30 cents a share, against \$900,138 or \$3.48 a share in the first half of the previous year.

Wood Goes to Copenhagen

NEW YORK, Aug. 16—Keith Wood, managing director of General Motors International at Copenhagen, sailed for Copenhagen Aug. 2, after a month's visit at the New York office of General Motors Export Co. and domestic General Motors factories.

Prize Is Trip to Fight

KANSAS CITY, MO., Aug. 7—Tex Rickard is not the only person to "commercialize" the Tunney-Dempsey fight in Chicago, Sept. 22. C. G. Rowan, manager of the Kansas City branch of the Diamond T Motor Car Co., is conducting a sales contest with a trip to the fight as first prize. All salesmen making as many as four new truck sales in the month are eligible to compete for the prize.

Jest—A Bit Cynical

By S. G. SWIFT

NATURALLY enough I don't wish to become known as a giver of unsought advice but I can't well refrain from commenting on the fact that the "one-wrench" repairman pays many times over for the tools and equipment he doesn't have. He loses enough in profits throughout the year to buy the finest outfit obtainable.

Have the right tools to do the job right. Buy them all at one time if you are able; but buy them—that's the important thing to do. They don't cost anything—in the final analysis.

* * * *

THE other day a fellow told me about a set of tires he had seen that had traveled 120,000 miles without appreciable wear. It seems that they were used on an airplane.

* * * *

HAVE you been bitten by the turnover bug? Whenever you get the urge to cut down on your stock until your shelves are as bare as Old Mother Hubbard's cupboard with the wholly creditable thought of making more money by reason of additional stock-turn, why not pause for a moment and consider that money at the bank rarely sets you back more than 6 or 7 per cent per year? The daily loss of a couple of good sales will cost the average dealer more in profits than he can ever hope to make in turnover.

Your grandfather used to think that he had to keep a complete stock of goods on hand in order to take care of his trade. He was old-fashioned and we all know that old-fashioned methods of doing business are all wrong today—yet you can't improve on some of them very much.

* * * *

A BILL for some household necessities—that I hope to be able to pay before the first of some month—reminds me to remark that nearly everything is more expensive these days, regardless of whether it be shows, furniture, clothing or house rents. There's a reason for this extra expense, mostly to be charged to the high rate of wages paid. And yet there is no labor that is better paid than that which makes automobiles—and automobiles cost less and are better than they ever were. Figure that one out.

* * * *

I DON'T want to give away any secrets, but I am inclined, from my observation, to believe that many garagemen are cashing in on the profits to be made from washing cars. I hope you are one of them; if you aren't, you're overlooking a big opportunity. A good car laundry is one of the best profit makers that any garage can have. But it must be a good one. The requirements are few; capable employees, proper use of solutions and a dependable washer. This, plus advertising will bring you jobs—you won't have to wait for them to come to you.

Every garageman who has entered this branch of the business has made money—provided he started right. That is the one important point. The sudden popularity of car washing has led to the manufacture of an occasional poorly engineered washer, made to sell at a price, and many a hasty buyer of such machines has had reason to regret his choice. But the good ones are easy to find.

And another thing, my garage-and-service-station-owning friends tell me that it pays to get an outfit capable of handling a lot of work—a bit oversize, so to speak. I'm just passing this information on to you for what it is worth—which is a lot.

* * * *

I ADD to my list of friends who have failed in business the name of another man who should have been successful. He had what is commonly known as, "everything." He was an excellent salesman and had good ideas of how to run a business. But he struck hard times just as he was getting a toehold, turned his face to the wall and passed out of the picture, if you don't mind your metaphors a bit scrambled. There are plenty of this type. They go like free beer at a truck drivers' picnic when the going is good and fade like a \$20 paint job the moment they're called on to withstand reverses. They remind me of the prize fighting "find" that the papers tell us about from time to time. He's a wonder at shadow boxing, shapes up like a Hercules and appears to be headed straight for the crown. But he lacks the one necessary thing—the ability to take it on the chin. One good stiff uppercut and he's a singing waiter.

Altoona Duco Co. Moves

ALTOONA, PA., Aug. 18—The Altoona Duco Co., headed by C. M. Piper, has moved to a larger shop at 2420-22 Union Ave.

Chauffeurs Borrow New Yorkers' Cars

Owners Protest Inability to Obtain Reliable Drivers for Automobiles

NEW YORK, Aug. 17—One of the troubles experienced by owners of big automobiles in New York is to secure reliable operators. There are plenty of men, both American and French, anxious to secure positions as chauffeurs, but those who can be relied on to look after their employer's interest and at the same time be capable of making minor repairs are few and far between and when found are usually paid good salaries.

Many of the men are good operators and honest, but they cannot resist the temptation to use the machine in their charge for the benefit of their friends whenever an opportunity presents itself. Several accidents have occurred when the machines were being used by the operators without the knowledge of their employers.

In this direction the experience of one prominent New Yorker is interesting.

He owns a handsome electric brougham. The vehicle is used principally by his wife for calling and shopping. Recently his better half reported that the batteries must be out of order, as several times they became exhausted before the completion of her daily rounds. The owner complained to the owner of the garage where the vehicle is stabled.

The latter responded that he could not expect the batteries to be fully charged, as the brougham was out all day and every night, sometimes until five o'clock in the morning. An investigation was started and revealed the fact that the chauffeur was in the habit of taking the brougham out and doing hack work among the theatre crowds!

The experience of the New Yorker was duplicated, some time ago, in Chicago.—From MOTOR AGE, Aug. 21, 1902, 25 years ago.

Whalen Sails for S. A.

NEW YORK, Aug. 17—W. T. Whalen, vice-president and general manager of General Motors Export Co., sailed Aug. 13 to visit General Motors plants in Buenos Aires, Sao Paulo and Montevideo.

Dunn Motors Distributes Olds

AUGUSTA, GA., Aug. 16—Announcement has just been made here of the appointment of Dunn Motors, Inc., a representative in Augusta for the Oldsmobile line.

Names Southern Distributor

ATLANTA, Aug. 11—According to an announcement by the southeastern



"Reliable Chauffeurs Are Scarce"

Family and chauffeur of Periwinkle Birtling, posed in front of the club house of the League of American Wheelmen, New York. Mr. Birtling, inside inspecting the glassware, heads a committee of car owners whose chauffeurs have been appropriating the vehicles after hours and using them as taxicabs. (See story at left.) Nosmo King, the Birtling's chauffeur, was caught in the act, but his wife is the Birtling's cook, so he was retained in service. The car shown is the popular rear entrance Straight-Line-One, which is supplied with windshield if desired

branch of the Olds Motor Works here, a new distributor has been appointed by the company at Gastonia, N. C., to handle Oldsmobile sales in that section of the Carolinas, the company having been organized and incorporated the latter part of July as the Gastonia Oldsmobile Co.

O. P. Wright, of Lowell, N. C., and D. B. Hanna and W. Z. Plyler, both of Gastonia, are the incorporators.

Hildebrand Holds Sales Meeting at Spokane

SPOKANE, WASH., Aug. 17—T. F. Hildebrand, zone manager of the Chevrolet Motor Co., arrived in Spokane recently and held a meeting with a number of Chevrolet dealers from Idaho and Washington. He also addressed the retail sales organization of the company in the evening.

"From my observations and inquiries I knew that this year's wheat crops in the Inland Empire are much better than they have been in years," said Mr. Hildebrand. "In addition farmers are getting excellent prices for their commodities. This means much to the business man and the manufacturer."

Kohl Joins Automotive Tool

MILWAUKEE, Aug. 17—Fred W. Kohl has joined the Automotive Tool Mfg. Co. as vice-president in charge of sales. Mr. Kohl is widely known in the automotive wholesale field.

Buys Midway Service Station

ST. MARIES, IDA., Aug. 16—The Midway service station has been purchased by Samuel G. McLaughlin, formerly of Harrison, from W. H. and Charles Davis.

GMC Buys License for Blossom Lock

CLEVELAND, OHIO, Aug. 15—General Motors Corp. have purchased the license to manufacture the Blossom ignition and transmission lock, it was announced today by C. W. Blossom, president of the Blossom Lock Co. Patents are held by this company. The license applies to locks for all except Ford cars, Blossom said.

Sale of the license means removal of the manufacturing operations to the plant of the Delco-Remy Corp. at Anderson, Ind. Engineers are expected to develop a lock for the new Ford cars, if these come out with gear shifts, to which the Blossom lock can be applied. If this is accomplished, Blossom said, manufacturing will resume again here.

Canadian Ford to Start

OTTAWA, CAN., Aug. 15—Official intimation that the Ford Motor Co. of Canada, Ltd., Ford, Ontario, expects to be employing men on a general production basis about Sept. 1 has been made by Wallace R. Campbell, vice-president and treasurer of the Canadian Ford. No word was given on the actual details of the new Ford car nor of production plans for Canada.

During the manufacture of the Model T car, the Ford in Canada employed between 5000 and 6000 men.

Form Knight Dealership

LONDON, OHIO, Aug. 17—The London Knight Motor Sales Co., a partnership composed of Jacob Grose and James O. Cummins, has been formed to distribute the Falcon-Knight line in Madison County.

CLOSE UP AND LOW DOWNS

By SAM U. L. SPARKS

WELL, I have made me a resolution in regards to what I will do with the new 1928 Halfpast Sixes, which I see by the factory advertising they are what you might call a ten-strike, even if they are Halfpast Sixes, and if all the adjectives is true which their ad-writer ferreted outa the dictionary, my contemptuary, Whimpers of Whimpers Garage, might just as well crawl in his hole and pull it after him.

Anyhow, I got my office Queen to jazz up her typewriting machine and put my sentiments in plain English, which if anybody, maybe a newspaper reporter or something, should step up and ask questions I can hand him one of them slips and let them be my official spokesman.

The momentuous statement on said slips reads like this; "I choose not to run for nobody in 1928."



One of my favorite wise-crackers was a Persian guy, by name Omar, which used to be a tent-maker but quit and went into the cigarette business. He was wiser even than a automobile salesman, and he used to spend his days sitting under the bough of a tree with a jug of wine and a ukulele and one of his famous tunes was:

"Four things come not back: the spoken word, the sped arrow, the past life and the neglected opportunity."

"Neglected opportunity" is Persian for "neglected prospect."

I have got a habit of regarding everybody as a prospect. You can't always tell a bird by his feathers, and irregardless of what he looks like a prospect ain't no prospect unless you treat him like one.

* * * *

Talking about politics—they's been considerable of talk in the three counties in my territory about this here "farm relief." So I have decided to give it to them. Not by spending my vacation amongst them, but by giving them relief from my well known habit of selling them a Halfpast Six if they give me half a chance. And whilst I am pursuing my piscatorial pursuits, et cetera, maybe the factory will have a chance to catch up with my orders.



I am one of those guys which believes if you want a thing done right you had ought to do it yourself, and if you want to sell anything you had ought to go out and find some one to sell it to.

No doubt some of my gentle readers sell now and then a automobile or two. If you are a fair to middling automobile dealer, you have had some of these here factory salesmen come to you and try to sell you on the idea that you had ought to be handling their cars in the stead of the one you been selling. And if not a factory salesman, maybe your distributor's wholesale manager.

What I mean, these factory salesmen are selling cars to distributors and distributors are selling them to dealers and what I can't understand is how the dealers figger it out that all they gotta do is put out a sign reading, "Halfpast Six Dealer" and expect customers to flock in.

Just because you and me are retailers ain't no reason why we had ought to act like we are "tail-enders." What I mean, what comes to him who waits ain't much if he is a automobile salesman.

Whippet and Willys-Knight Sales Gain

Toledo Manufacturer's Business is Ahead of Industry As a Whole

TOLEDO, OHIO, July 15—Total sales of Whippet and Willys-Knight models for the first half of this year are 30 per cent over the same period of last year, according to a statement issued today by company officials. In the same period the automobile industry as a whole shows a loss of 14.3 per cent compared with the first half of 1926.

Not only does the Toledo manufacturer show a sustained sales increase over the six months' period, but the month of June also gives Willys-Overland a gain of 19 per cent, while the industry as a whole lost 23 per cent. Outstanding gains in the sale of Willys-Knights and Whippets are noted in the New York Metropolitan area, where the first six months show an increase of 40.5 per cent with industry's loss of 9.3 per cent in the same period. Sales during June in this district disclose an increase of 37.4 per cent for Willys-Overland, while the industry lost 3.6 per cent.

States reporting from the Pacific Coast section show an increase of 12 per cent for Willys-Overland for the first six months compared with the industry's loss of 19 per cent. June shows Willys-Overland's gain at 6 per cent, while the industry as a whole lost 19 per cent.

John Doran

SPOKANE, WASH., Aug. 11—John Doran, head of the John Doran Co., Essex and Hudson automobile distributor and dealer, died suddenly Aug. 5, after an operation for an acute attack of appendicitis.

Mr. Doran was 43 years of age and came to Spokane 20 years ago from St. Paul, Minn. In 1910 he acquired the Packard automobile agency and in 1912 the Hudson, which he has handled since under the name of the John Doran Co.

Conover With Lestre

COLUMBUS, OHIO, Aug. 17—Harry A. Conover, formerly with the Conover-Mapes Co., of Springfield, Ohio, has disposed of his interests in that company and has become sales manager of the Lestre Motor Sales Co. The firm is central and southeastern Ohio distributor for Marmon.

Build New Plant

NEW LEXINGTON, OHIO, Aug. 15—A new salesroom and service station are being erected for the White Motor Co., at Brown and Jackson Sts. The company distributes Chevrolets in Perry County.

Camden Would Bar Cars From Highway

Freeholders Say They Endanger Life and Resemble Steam Locomotives

CAMDEN, N. J., Aug. 17—A determined effort is being made by city officials to exclude automobiles from the Camden County roads and thereby prevent them from using the Atlantic City stone and gravel roads. The attack upon this class of vehicles was really begun last winter, when Assemblyman Gill, of Camden County, caused a bill to be prepared excluding them from all state roads. Considerable pressure was brought to bear upon Mr. Gill and the bill was not introduced.

Since that time, and since summer travel began, the autos have been using the stone and gravel roads from Camden to Atlantic City as a favorite thoroughfare. They have used it at all hours and run at the highest rates of speed, and in the face of numerous protests on the part of residents, until at last a vigorous attack was made upon the machines at this morning's meeting of the Camden County Board of Chosen Freeholders.

Mr. Gill, who is chairman of the stone road committee, arose and called attention to the outrageous conduct, as he called it, of the automobilists. He declared that their presence on the Camden County roads was endangering the safety of other travelers; that they were absolutely regardless of the rights of others; and that they traveled at a rate of speed that is entirely inconsistent either with the pleasure or safety of others who had more right to the roads than they.

"They resemble steam locomotives more than they do vehicles," said Mr. Gill.

Mr. Wood seconded Mr. Gill's motion, and the solicitor was directed to report the best method of ruling the autos off the roads or of regulating the speed to 10 miles an hour.—From MOTOR AGE, August 16, 1900, twenty-seven years ago.

Mooney Sails for Europe

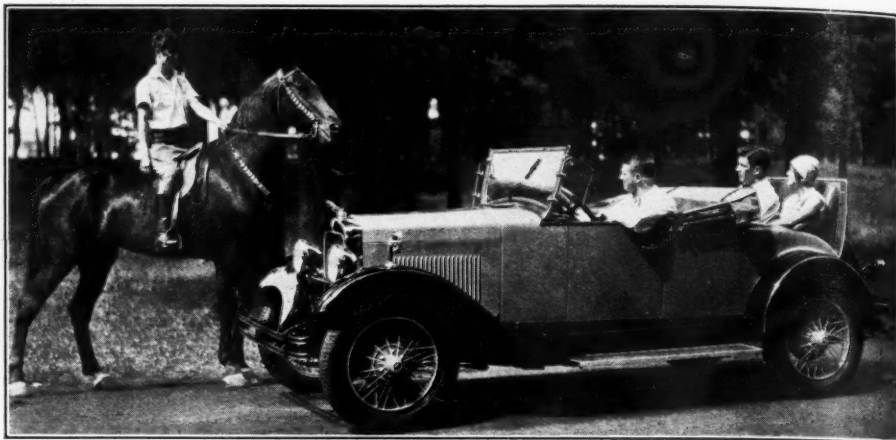
NEW YORK, Aug. 15—J. D. Mooney, president of General Motors Export Co., sailed from New York, July 23, for London. He will remain in Europe until the latter part of October.

Lyon in West

KANSAS CITY, MO., Aug. 17—Newell Lyon, regional vice-president of the White Co., with headquarters here, is spending the month of August in the West. He will visit Denver, Santa Fe, Salt Lake City and other points.

Barner Motor Co. Moves

HARRISBURG, PA., Aug. 15—The C. H. Barner Motor Co. has moved



Erskine Sport Brilliant Performer

Engineering data on this Erskine Six sport roadster shows that it has a speed of 60 miles an hour and an acceleration of 5 to 25 miles an hour in 8½ seconds. It is equipped with wire wheels

from 343 S. Cameron St. to a new building at Twenty-second and Derry Sts.

The company took on the distribution of Kissel cars last year and rapidly growing business has necessitated larger showrooms and shop facilities.

75,526 Cars Registered In Franklin County, O.

COLUMBUS, OHIO, Aug. 16—According to the report of County Auditor Arthur J. Thatcher for the first seven months of 1927, a total of 75,526 motor vehicles have been registered in Franklin County since the first of the year. This is almost 1500 more than were registered during the whole of 1926. Fees collected to Aug. 1 totaled \$298,131.19.

Found Quinn Chevrolet Co.

TYLERTOWN, MISS., Aug. 16—The Quinn Chevrolet Co. is the name of a new dealer firm organized and incorporated at this place the early part of this month to handle the Chevrolet line in this district. Incorporators named are L. S. Quinn and L. B. Magee.

Now It's 'Dump' Parts

COLUMBUS, OHIO, Aug. 16—One of the most peculiar affidavits ever presented to Charles Sherman, bill of sale deputy in the office of the county clerk, appeared recently when H. S. Anderson made application with the sworn statement that the car "was assembled from parts found on the Fifth Ave. dump." The bill of sale was issued which permitted Anderson to obtain number plates.

Citroen to Build a Low-Priced Six

WASHINGTON, Aug. 17—The depression in France, which is affecting all industries, has not yet been felt by the Citroen Co., which is operating at full capacity, says a report to the Department of Commerce, from Trade Commissioner Louis Hall, at Paris.

The present daily production exceeds that of the best previous record of 400 cars, he reports. The company's leading model is a 10 hp. car which is most completely and luxuriously equipped.

The company has announced that it will introduce a new six-cylinder car, reported to be the lowest priced six on the European market.

Dreibelbis in London

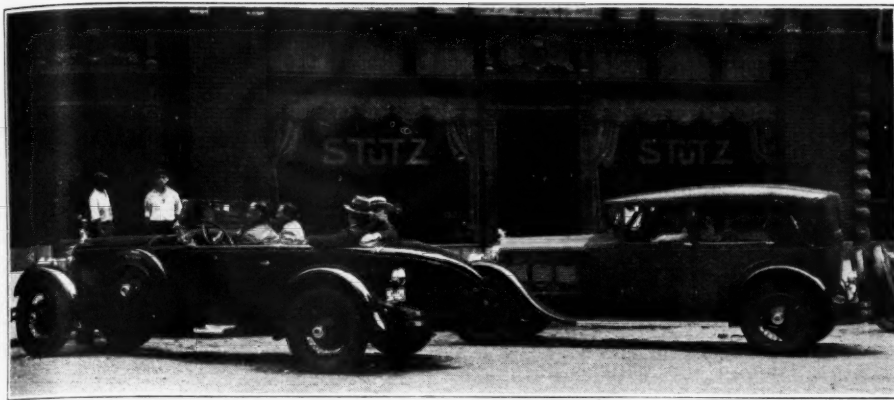
NEW YORK, Aug. 15—J. H. Dreibelbis, vice-president of General Motors Export Co. and regional director for South America, arrived in London July 16.

Elcar Carolinas Co. Formed

ASHEVILLE, N. C., Aug. 17—Thomas A. Dailey and A. W. King, both of whom have for some time been identified with the automobile business in Indianapolis, Ind., have incorporated a new firm under the name of the Elcar Carolinas Co., for the retail and wholesale distribution of the Elcar line in the Carolina district.

Found Nedley Chevrolet Co.

APALACHICOLA, FLA., Aug. 16—The Nedley Chevrolet Co. was organized and incorporated here the latter part of July with a capital stock of \$15,000, and has taken over the Chevrolet franchise for this section of Florida. R. P. Nedley, of this town, heads the company.



Nothing Barred But Law-Breaking

President Moskovic and factory experts of the Stutz Motor Car Co. of America, Inc., are making a tour with the two Safety Stutz cars shown in the illustration. The public is allowed to drive the cars and no demonstration, provided it does not entail law-breaking, is barred

No Changes to be Made in Whippet

TOLEDO, Aug. 15—A statement just issued by Willys-Overland, Inc., says that reports of changes to be made in Whippet design or construction are without foundation.

It is cited by Willys-Overland that the most recent announcement in the four-cylinder field dwells upon increased power development, lower distribution of weight and greater compactness in body dimensions without decrease in the amount of usable room in the bodies.

Rumors regarding forthcoming developments in light car manufacture dwell heavily upon four-wheel brakes and it is generally anticipated that this type of braking equipment will be in general use among all cars within the next several months.

Strickland with Bower Co. as General Manager

DETROIT, Aug. 17—S. A. Strickland has joined Bower Roller Bearing Co. as general manager, his appointment being accompanied by that of Dr. Hilton G. Freeland, as manager of the metallurgical department. Mr. Strickland previously was connected with the Hoover Steel Ball Co. and with the Imperial Ball Bearing Co. Dr. Freeland also was connected with the Hoover company and with the University of Michigan.

Appoints Chicago Distributor

ST. LOUIS, Aug. 16—The Moon Motor Car Co. announces that it has disposed of its franchise in Chicago to Scheunemann Motors Co., 2247 S. Michigan Blvd., which concern will act as distributor for Moon and Diana cars in the Chicago district.

Scheunemann & Co., which handled Moon several years ago in Chicago as dealer, is an organization of wide ex-

perience in automobile merchandising, having handled a number of well-known makes of cars in the past in addition to the Moon line.

Warren Dusenbury

DETROIT, Aug. 16—Warren E. Dusenbury, former trustee and secretary of the Newark (N. J.) Automobile Trade Association, died Aug. 9, following an operation for appendicitis. He had been actively interested in the affairs of the Newark association for six years and as a member of the legislative committee for two years had done a large amount of construction work for the industry in New Jersey.

Dealer-Golfers Meet

NEW YORK, Aug. 15—The fifth monthly golf tournament of the Automobile Merchants' Association of N. Y., Inc., will be held tomorrow at the Winged Foot Golf Club at Mamaroneck, N. Y.

Repair Charge Is Minus 17 Bucks

PORTLAND, ORE., Aug. 17—"Oh, that's all right," said E. R. Lundek at his service station today, declining to take compensation for a minor repair he made on an automobile.

The car, its numerous occupants waving cheerily, whizzed away.

A minute later Lundek wondered whether his faith in human behavior was somewhat shaken. His till was open and some \$17 had disappeared.

MORAL: If you can't keep your eye on the occupants as well as the car, forget the car.

Horseless Funerals for Brooklynites

Angels on Tombstones Scare Horses, So New Hearse to Be Motorized

BROOKLYN, Aug. 15—Charles T. Earl, an undertaker of Brooklyn, will have horseless funerals and is going to commence by introducing a horseless undertaker's wagon.

Mr. Earl called at the eastern office of MOTOR AGE and gave his views on the subject, which were, in short, that the undertaking business was a solemn, touchy and peculiar business and that anything radical would be sat down upon by the rest of the undertakers. So he will commence with a wagon and if the mourners take to it kindly he will introduce a horseless hearse.

Mr. Earl says that the average horse doesn't seem to appreciate the solemnity of the occasion, that it scares at the little angels on tombstones and that he would prefer a balking automobile to a runaway team any day.—From MOTOR AGE, Aug. 15, 1901, twenty-six years ago.

Automotive Exports 8.5 Per Cent of Total

WASHINGTON, Aug. 17—Automotive exports in June of this year constituted 8.5 per cent of the total of all exports combined shipped from the United States to foreign countries according to an analysis of foreign trade for the month made by the Department of Commerce. The total exports were \$356,947,000 for the month and of this sum \$30,649,000 or approximately 8.5 per cent was accounted for by automobiles, trucks, etc.

Comparing June, 1927, with June of last year the figures show that the total exports of all commodities increased but 6 per cent, whereas the automotive exports in June, compared with June of last year, showed an increase of 28.5 per cent, or more than four times the amount of increase when compared with all other commodities.

Romine at Milwaukee

MILWAUKEE, Aug. 15—R. T. Romine, general sales manager of Hudson Motor Car Co., and W. A. James, advertising manager, were guests at a state-wide conference of Hudson-Essex dealers recently held at the headquarters of the Jesse A. Smith Auto Co.

Flynn Joins Oakland

DETROIT, Aug. 16—C. J. Flynn, formerly production engineer in the railway and jack division of the Buda Co., has joined Oakland Motor Car Co. and will be engaged in manufacturing research.

Gas, Oil and Hot Dogs—Drive In

INGLIS M. UPPERCU has begun construction of his new \$2,500,000 Cadillac building, with 13 stories and basement, in New York City. We won't be surprised to hear of aviation tournaments on the roof and six-day bicycle races in the basement.

Howard Crawford, vice-president and general sales manager of the Pines Winterfront Company, Chicago, addressed Herman Schade's dealers at a business gathering in the Penn Athletic Club, Philadelphia, last week. The dealers took off their coats to ward off the heat while they listened to the logic of putting on automatic shutters to keep out the cold.

"Gas, Oil and Hot Dogs" is the title of a new department in MOTOR AGE. The Technical Editor amends this to read, "Volatile Hydrocarbons, Lubricants and Frankfurters."

And now the Baby Benz is to be sold in the United States. It is to be hoped that it doesn't prove to be a bloomer. (You'll have to know Milt Gross to spear this one. Benz? Pents? Ah-h-h-h!

New closed Oldsmobiles have rounded-off rear quarters and form-fitting seats. Making the car's rear quarters even more comfortable for the passengers' rear quarters.

"Moon coach has flexible body," says Moon literature. This suggests a slogan for which there is no charge: "The car that twines itself around your heart."

First Ford-Stout airplane has been completed. Next will follow the regular and the slim.

"Spirit of St. Louis is being widely used as a name for Ford touring cars. Three were seen in the local motor camp last night."—*N. Y. World*. What's the matter with "Spirit of St. Vitus?"

Northwest Mounties are using airplanes to "get their man." And all the criminals are probably very much up in the air about it.

"For Sale: Good used car. Owner died suddenly and must be sold at once" (classified ad). Looks like a good opportunity for some medical student.

From a letter to MOTOR AGE's mechanical editor: "Where does the moisture come from for use in the vibration dampeners?" How should we know in this *dry* land?

"Gardner Produces Four Eights," says headline of news story sent out from the Gardner factory. Pretty heavy production that.

The new Peace automobile bridge connecting Buffalo with Canada is owned jointly by the Dominion of Canada and the State of New York. The structure is well named at that, as each country owns a piece.

William C. Durant is reported to be negotiating for outright purchase of Universal Pictures Corp. Well, why not? He's got the Stars.

"Redhead" engine has been adopted as standard equipment on the Chrysler "62" roadster. When you see this redhead, you see 62 white horses.

A dispatch from Paris says women's skirts are to be higher. Everything is higher, these days, except automobiles.

John Cleary Says—

¶ This morning a fellow showed us some figures he had worked out on the volume of automobile business for the year ended June 30, 1927, as compared with the same period a year ago.

¶ According to those figures, the industry—exclusive of Ford—sold 141,000 more cars than last year, and the wholesale value was \$96,000,000 less.

¶ Some dealers might cite this as further proof that an automobile costs less today than ever before.

¶ Others might see in it only an indication of a tremendous increase in the sale of lower-priced cars.

¶ But the wise dealer—ambitious to exceed last year's profit—will be spurred by it to go out and sell more automobiles and to watch with greater care every item that affects his profit per unit.



Then and Now in Motor Age

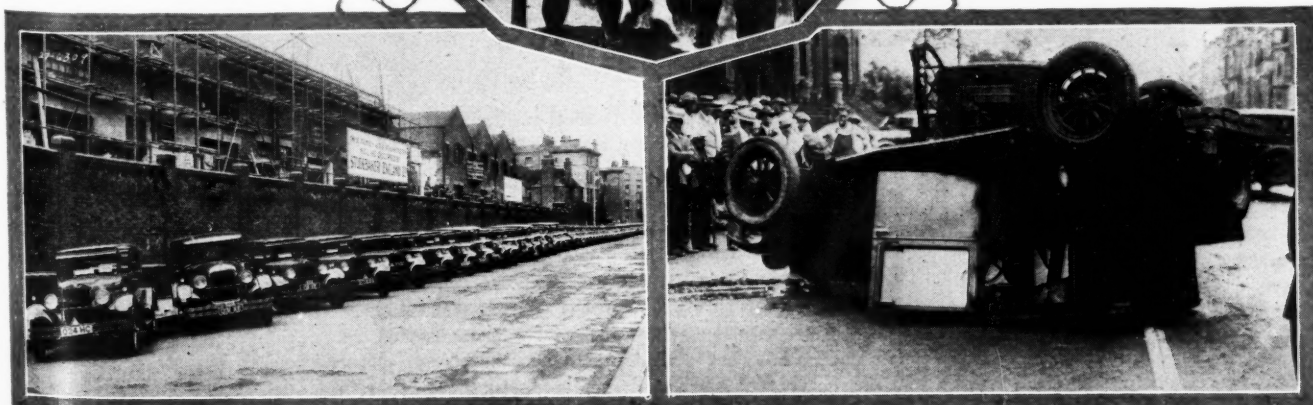
Once more age triumphs. The merry Oldsmobile of the dim and distant past, shown in the top picture, took first prize in a Detroit parade of cars of ancient vintage. Immediately below the prize-winner are pictured the first Chevrolet and the 3,696,318th



Don't whip it! was undoubtedly the advice given to John N. Willys by Count Clarence von Rosen, President of the Royal Swedish Automobile Club, on the occasion of the canter, pictured at left, during Mr. Willys' recent visit to Stockholm

Sixty-three Studebaker and Erskine cars ready to start on a driveaway from the Grosvenor Road premises of Studebaker of Great Britain, Ltd., said to be the largest single driveaway of any American car known to Great Britain

Turnover is a thing that a businessman desires more than once a year, but the occupants of this car will be thankful if they never experience another. Fortunately they were not seriously injured and a Weaver crane did the right thing by the car



Fishing *for* Fish

By John Cleary

SALESMANSHIP is like fishing. A salesman is a man who gets orders. A fisherman is a man who catches fish. The best salesman is the one who gets the most orders. The best fisherman is the man who catches the most fish.

Is there any other respect in which selling resembles fishing?

Let us see.

There were ten of us—writers and artists—who drove down to Little Creek last Saturday to reduce the number of weakfish and croakers in Delaware Bay. We were deadly serious about it, else we would not have dreamed of leaving our soft beds at 2.30 in the morning, and of starting from Drexel Hill a half hour later on the 80-mile drill to Little Creek.

Married, most of us, we had told our wives not to bother getting anything in for Saturday or Sunday. We'd bring home enough fish to keep our families in food until Monday. That's how serious we were about it. For the nonce, fishing was to be our vocation, not our avocation.

You are not interested in the ride down, the breakfast of ham and eggs at the Captain's cottage, nor the activity at the bridge while the boats were leaving for the fishing grounds.

This story begins with the departure of the good ship Pearl Jean, Captain Jim Muncey, skipper; Howard Everett, mate, and the rest of the writers and artists as passengers and crew. We left at 6 a. m. There is a ride of about two miles down Little Creek before you enter the bay.

About half-way down the stream, we picked up the Cap-

tain's father, an 80-year-old fisherman, rowing an old fishing dory. We towed him out to the bay and dropped him about a half-mile offshore. We continued out a mile or so before we dropped anchor. Bait was cut and we threw our lines over.

There was something doing almost immediately. The technical editor got a bite and quickly landed a fair-sized weakfish. Then Mac, the artist, pulled a bigger weakfish into the boat, the biggest fish he had ever caught. There was a lull after that. We finally got discouraged and moved from there to another spot.

Here the same thing happened. Shortly after we anchored, we caught two or three fish. Then we moved again.

We kept this up all day, moving around from spot to spot, in the hope that we might run into a school.

When we finally went in we had a total of 34 fish, an average of a little better than 3 apiece for the eleven fishermen on the boat, including the Captain. But don't let this average fool you. You remember Hilaire Belloc's story about the deceptiveness of statistics. "If you and I were

POP MUNCEY fished in the one spot all day long and averaged a better catch than the party of visitors who sailed from place to place vainly hopeful that the next stop would be over a finny school. Pop followed the tactics of the men whose success has been greatest in salesmanship, and he came out on top. Here's a fishing story with a moral for automobile salesmen.



and for Prospects



together and a bolt of lightning struck you, killing you instantly," said Belloc, "according to the statisticians, we'd both be on the average half-dead."

The facts in the case regarding the catch of 34 croakers, sea trout (the other name for weakfish), Cape May goodies, grunt and hog-fish, are that these were landed by eight out of the eleven anglers. The best fisherman in the crowd caught 10; the worst, one. Three of them caught nothing.

If you have been patient up to this point, please be encouraged by the thought that you are now about to learn another item of resemblance between salesman-ship and fishing.

On the way in, we again picked up Pop, the lone fisherman in the dory. He had not moved from the same spot all day.

He had caught 13 fish, more than a third of the

number captured by the 11 in the bigger boat, and more than the best fisherman among those 11.

His bait was the same—expensive fresh crabs. He used a hand line, while the best of the eleven used casting rods. How come he caught so many more?

It is this fisherman's belief that the secret of Pop's success lay in sticking at the same spot.

(Turn to page 34, please)

18 Years an Average S

*Well, He Tore Loose and Rung Up a
\$40,000 Volume in One Month!*

By Mandus E. Bridston

ED KINNEBREW didn't know it was in him until he got mad. One day his boss twitted him when he remarked that he had been busy. Words were passed and Kinnebrew flung out the challenge that he could beat the whole outfit. His boss (proving thereby he was positive it could not be done) wagered a bottle of firewater. Just what Kinnebrew did with the quart is outside the province of this story, but he did win it. This article describes his winning methods.

This winning salesman focuses his ammunition on the point which interests the prospect. He finds this customer is particular about the upholstery, so he is explaining the difference between "U" and "W" weave



IT wasn't the fervor of a sales contest that prompted this mediocre salesman to step out into the stellar class over night.

It all began with some friendly badinage at an informal speaking club organized by a dozen employees of the Sands Motors Co., Studebaker dealer, Seattle, Wash.

"Been so busy I've not had time to prepare much in the way of a talk tonight," remarked Ed Kinnebrew, by way of apology.

"Yah, by the looks of the board, I can see you've been busy," twitted "Bill" Culberson, the general manager.

One word led to another, and then Kinnebrew made the statement that he could beat the whole blooming outfit—and Culberson wagered a quart of the best Scotch that he couldn't!

But Kinnebrew made a better speech than he knew that night, for all that he wasn't prepared, and at the end of June, the board revealed that he had sold 45 cars—a total volume of \$40,800! This is a record far outstripping all previous high marks set by Sands' salesmen, and it is believed that it stands alone in the

entire Pacific Northwest. This total consisted of new Studebakers and Sands Plan used cars—\$20,755 volume for the new Studebakers and \$20,045 for the Sands Plan cars.

This man's record is all the more remarkable because the 45 cars were not sold in the city of Seattle, but out in the "sticks"—the small towns, the ranches, the mines. But he meets all classes of people in the small towns, he tells you, with a soft, Southern slur coloring his words—from "senatahs to the workin' man." Interestingly, although he comes from the blue-blooded South and his family tree goes back for 18 generations,

it's th
Kin
barely
likes
smiles
years
countr
manen
back f
substa
to get
Is P

Salesman, and Then--

Ed Kinnebrew, Seattle Studebaker salesman, who was just an ordinary salesman for 18 years before he became an extra good one



How Kinnebrew Does It

"I start closing the order when I start talking, and my planned sales talk enables me to eliminate negative gestures. I make a bid for the order at regular punctuations but I never force a prospect. Folks like to buy—they don't like to be sold. A salesman has to have a delicate balance between talking too much and talking too little."

Georgia? And how did he do it?

"Guess I never got enough momentum before,"

he comments. "I believe there's a lot in that. You know, I thought the average sales volume was my class, and it never occurred to me to aim beyond it. But I've got the momentum now—and I sure don't intend to let it slip.

"I think a salesman is too apt to find excuses for not working: 'Times are too hard to sell cars now'—'It's just after a holiday'—or 'I don't feel top-notch today.' I think the 'times-are-hard' condition is mostly in folks' minds, and the poor salesman believes it. Why, I've had days when I dragged myself out to call on a certain prospect and all the while I was pointing the car toward his place I was hoping to heaven that he wouldn't be home when I got there. I guess every salesman has spells like that—I know I've talked with those who have—but you just can't let them get you!"

Kinnebrew didn't have any "spells like that" the month he was piling up his record-beating sales volume. In the morning he would drive into the Seattle office of the Sands company from Auburn, Wash., his home and headquarters "out in the sticks." After the business of signing contracts, turning over payments, etc., was completed, back again to the country roads, and the morning hours made up by working until midnight.

Sixteen of the 45 orders constituted repeat business for this salesman, and four of the used cars were bought sight unseen—just telephone conversations: "Kinnebrew, I want a used car, price so-and-so . . ." Note-worthily, too, he resold the used cars which he took in on trades, and on this business netted his firm a profit of \$320.

(Turn to next page, please)

it's the every-day folks he likes to sell best.

Kinnebrew started selling automobiles before he was barely out of his teens, and he knows automobiles and likes 'em! "Niggers and horses and automobiles," he smiles, "you have to know how to handle them." Ten years ago he came West on a visit, but he liked the country so well that he decided to make the visit permanent. His connection with the Sands company dates back five years, and while his record has always been substantial, it has never been brilliant. His boss had to get him mad before his sales talk sparked!

Is he an easy-going Southerner, this man from

18 YEARS AN AVERAGE SALESMAN

While Kinnebrew may be a soft-speaking Southerner and is anything but the high-powered stock salesman type, he believes in selling a car scientifically. "Hit-or-miss methods are gone," he tells you.

"I always aim first to get an idea (he says 'idear') of why the prospect wants a car at all, what he's going to use it for, what's the point about an automobile that most interests him. It may be speed, it may be distinction, it may be comfort, it may be economy, and so on. If the prospect is a woman, I know that I must stress the refinements of the car, although I sold one woman recently who had an interest only in the motor. But she is rare. I aim to stress comfort to the man who wants comfort in his automobile—performance to the prospect who demands performance. Of course, sometimes you have to rather sense just what the idea is, but that isn't difficult if you've observed folks very much."

That brings up a point important in this man's 18 years of automobile selling, both in the 18 years of substantial, steady results, and in the recent month of brilliant achievement. He likes people—likes to study them. "Nothing I like better than to get off in a crowd where I can watch folks," he confesses. "People and automobiles are really the most interesting things in the world." It is this observance of people that enables him to focus his sales ammunition at the prospect's "idear" in buying a car. In sports parlance, he finds out what his man can take, and what he can't, and he "hits" accordingly.

But this doesn't mean that Kinnebrew just stresses one point in his sales talk—anything but! He has a planned sales talk, when he goes over the whole car in logical order, and he believes jumping from one part to another is all wrong. If he is explaining the motor, for instance, and a prospect opens the door and scans the upholstery, he tells him, "Hold your horses—I'll get to that in a minute," or words to that effect. Following the regular outline of a planned talk enables him to keep a talking point or two in reserve for the follow-up.

"The difference in folks makes the reactions different," he says, referring to his favorite theme of people, "so you don't go stale launching your planned campaign. I know many salesmen wouldn't agree with me in this, but I have found it the best way."

He has studied blonde and brunette types:

"Brunettes are harder to sell," he says. "They are more conservative buyers, and need time to digest the selling points. Again, I find blondes more prone to quick judgment, quicker to grasp facts, and I lead them a little faster in my sales outline."

"In selling automobiles, or any other product for that matter, I don't believe in even mentioning the other fellow's product. The minute you say, 'Now, this car has such and so—you won't find that on A's car or B's either.' Immediately your prospect gets a mental picture

A Bull's Eye

I THINK a salesman," says Ed Kinnebrew, "is too apt to find excuses for not working: 'Times are too hard to sell cars now'—'It's just after a holiday'—or 'I don't feel top-notch today.' I think the 'times are hard' condition is mostly in folks' minds, and the poor salesman believes it. Why, I've had days when I dragged myself out to call on a certain prospect and all the while I was pointing the car toward his place I was hoping to heaven he wouldn't be home when I got there. I guess every salesman has spells like that, but you just can't let them get you."

"I thought the average sales volume was my class, and it never occurred to me to aim beyond it. But I've got the momentum now—and I sure don't intend to let it slip."

of car A or car B, and you've awakened a comparative train of thought that holds up the order.

"I start closing the order when I start talking, and my planned sales talk enables me to eliminate negative gestures. I make a bid for the order at regular punctuations, but I never force a prospect. Folks like to buy—they don't like to be sold. A salesman has to have a delicate balance between talking too much and talking too little. I've seen salesmen talk themselves out of ripe business, and again, I've heard prospects actually obliged to ask about the points of a car."

Kinnebrew likes a good fight, whether it's a tussle with a speckled beauty (he never works on the first day of April) or a case of winning against three or four other car salesmen on the job. That's why he showed so much power on the hills in the past record-breaking month.

This salesman has always admired anyone who could sell, even when he was a youngster, and

when he got into the selling game himself, he liked it. But it took a bet to tell him that he *could* sell!

"While I do not have the 'cream-puffs' which sometimes come to the salesman on floor duty," he says, "I do get prospects through friendship, out here 'in the sticks,' as some of the city salesmen label my territory. Repeat business and recommendations from customers are really the best indications of salesmanship. He isn't really sold until he comes back for more!"

Kinnebrew never kills a prospect. He either dies a natural death or buys the other fellow's car before this salesman marks him "dead!"

Napkin Stunt Helps Get Business

HERE'S a promotion stunt which helped the Santa Ana Star Motor Sales Co., Santa Ana, Calif., in getting more business and which might be used with equal success by other dealers in other cities.

The concern went to a nearby drugstore which enjoys a large luncheon patronage and reached an agreement with the owner that the company would furnish the drugstore with paper napkins free in return for being allowed to imprint each napkin with the company's name and a sales offer. The Santa Ana Star Motor Sales Co. supplied the napkins, with each carrying this message:

"This napkin is worth \$5.00 on the purchase price of any used car. Limit, one to each customer. Santa Ana Star Motor Sales, 609 West Fourth St., Santa Ana, California. Phone 600."

Of course, all the folks who ate lunch at the drugstore or who ate sundaes or sodas at the drugstore saw these napkins and in this way the automobile company realized a splendid "circulation" of its offer at a low cost. As the result, this company is able to regularly trace several car sales every month to this stunt.

The idea may be utilized similarly by tire dealers, accessory dealers and all others in the retail end of the automobile industry.

Gardner Line



Gardner 75
sedan at
\$1,490

for 1928

*Comprised of Four Series of Eights. Four-Door Sedan at
\$1,490 and Four-Speed Transmission Are
Among Latest Developments*

By C. Edward Packer

A COMPLETE line of straight eight cars will comprise the 1928 offering of the Gardner Motor Co. of St. Louis. With a price range from \$1,490 to \$2,295 Gardner dealers are better equipped than ever before to cover their territories.

In addition to this advantage is the even greater one of having a wide range of car models, by means of which it will be possible to appeal strongly to practically any type of buyer.

With the rapidly growing market for eight-cylinder cars there is no doubt that the Series 75 sedan, selling at \$1,490, and the five-passenger coupe, selling at \$1,475, should become extremely popular.

Like other cars of the Gardner line, the Series 75 cars

Gardner 1928 models and prices are as follows:

Series 75	
5-passenger sedan	\$1,490
5-passenger sport coupe	1,475
Series 80	
5-passenger sedan	1,795
4-passenger victoria	1,745
5-passenger sport coupe	1,745
4-passenger roadster	1,595
Series 85	
5-passenger sedan	1,895
5-passenger brougham	1,895
4-passenger victoria	1,845
5-passenger sport coupe	1,845
4-passenger roadster	1,695
Series 90	
5-passenger sedan	2,295
5-passenger brougham	2,295

use Lycoming engines. This engine has a bore and stroke of 2¾ by 4¾ in. The N. A. C. C. horsepower rating is 24.2, but the actual brake horsepower at 3200 r.p.m. is 62.

The wheelbase of this series is 122 in. Both models of the Series 75 cars are equipped with the following: Gasoline strainer, thermostat, snubbers, gasoline gage on dash, stop-light, automatic windshield wiper, Griffin radiator ornament, heat indicator on dash, and a rear view mirror.

The interior of the cars are trimmed in walnut and upholstery is of Chase mohair with French type plating.

Butler silver-finished hardware is used. The walnut trim is extended to the instrument board, where there

(Turn to page 34, please)

Chrysler "72" Features Greater Performance and Comfort

Larger Engine and Bodies Now Offered—Prices Same as Model "70" Except the Crown Sedan Which is Reduced \$50

AN entirely new and larger engine and larger bodies are the leading features of the "Illustrious New" 72 model announced by the Chrysler Sales Corporation to replace the former 70 model. Seven body models are being offered at present, with prices identical with similar body models on the 70, with the exception of a \$50 price reduction on the Crown Sedan.

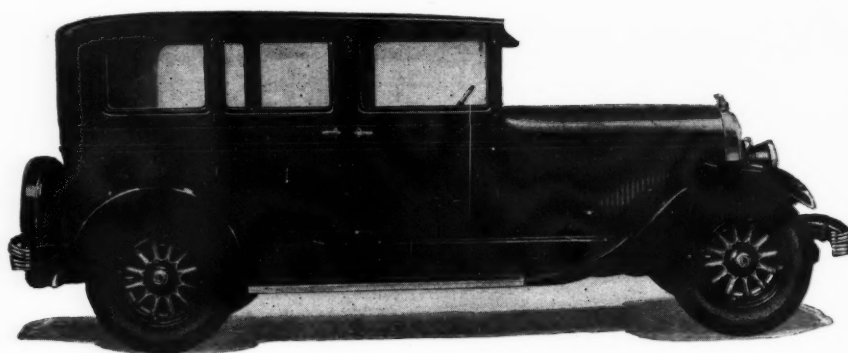
Rubber four-point engine supports are used on the new engine which has a bore and stroke of $3\frac{1}{4}$ by 5 in., a counterweighted seven-bearing crankshaft weighing 72 lbs. and new pistons of the Invar stout type, with five rings. Rubber shock insulators are also used for the spring shackles.

Due to the larger engine, which develops 75 hp. performance has been materially increased, a top speed of 72 m.p.h. as indicated by the model designation being claimed, as well as an acceleration of from 5 to 25 miles in seven seconds. Larger bodies, with five inch more legroom and saddle spring cushions contribute towards increased comfort, while appearance has been improved, through a higher and deeper radiator, individual headlight stanchions, new instrument panel and use of new color schemes.

As on the 52 and 62 models, the Chrysler Red Head

high compression cylinder head is standard on the roadster model, and is available on other models at additional cost.

The new engine represents a combination of features taken from the former model 70 and the Imperial 80. From this latter model are derived the counterweighted crankshaft design and the rubber engine insulation. The increase in bore from $3\frac{1}{8}$ to $3\frac{1}{4}$ in., and stroke from $4\frac{3}{4}$ to 5 in., gives an increase in piston displacement of from 218.59 to 248.9 cu. in., rated

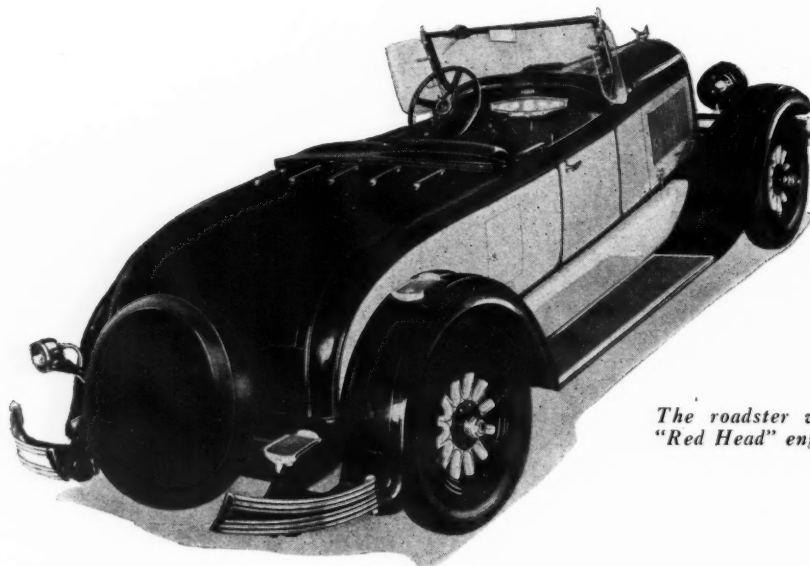


The Royal sedan selling at \$1,595

horsepower now being 25.35 hp. The crankshaft has been increased in size and weight to take care of the added power. To offset the added weight the shaft has been equipped with counterbalances bolted to the sides of the crank cheeks.

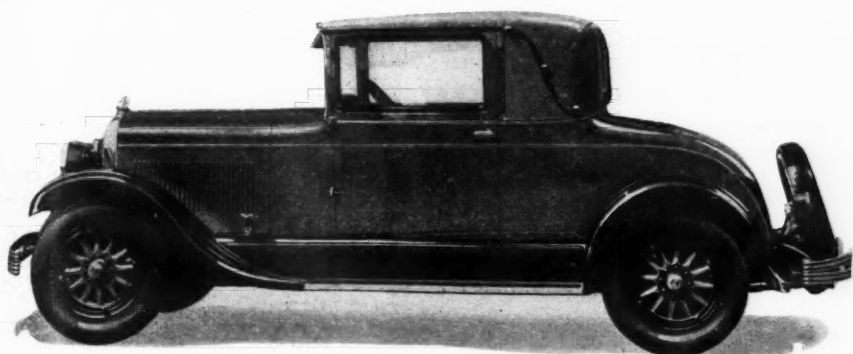
Connecting rods are longer in the new engine, now being $10\frac{7}{16}$ in. from center to center. Crankpin bearings sizes, with die cast bearings in the rod, are of the same dimensions as formerly. Piston pins are larger in diameter, now being $\frac{7}{8}$ -in., with the length increased $\frac{1}{16}$ -in. to $2\frac{7}{8}$ in.

The pistons are of the aluminum alloy Invar strut type and have five rings, four of which are of the compression type, the lower ring being an oil scraper. The four compression rings are L-shaped, and the first and third piston land is slightly smaller in diameter than the others, the flanges of each two adjoining piston rings meeting over this land. This design is said to have materially increased compression.



The roadster with "Red Head" engine

CHRYSLER "72" FEATURES GREATER PERFORMANCE



This 2-passenger coupe has comfortable rumble seat

Larger inlet valves also contribute to greater power, these now being 19/16 in. in diameter, while the 17/16 exhaust valve head diameter is retained.

Increased cooling capacity for the larger engine has been obtained through the use of a higher and deeper radiator. Water capacity now is 4 1/4 gallons.

On the flywheel a change has been made in that the teeth are cut in a steel ring shrunk on the flywheel rather than in the flywheel proper as formerly.

While a single plate clutch is again used, this is of new design, with the facings riveted to the plate, instead of being woven in as formerly. Outside diameter of the facings is 9 7/8 in., as against 9 5/8 in. formerly. A rubber cushioning disk similar to that adopted on the "62" has also been incorporated on the Model "72" clutch. Transmission gears are slightly larger than formerly. A seamless steel 2 in. propeller shaft with electrically welded forged ends and two ball and trunnion type universal joints are used.

Rear axles are similar to those used on the Model 70, the main changes being in increasing the size of the drive gear. This now is 10 in. in diameter as against 9 1/2 in. on the 70 and 1 3/8 in. wide, an increase of 1/8 in. Hassler snubbers are used all around. Gear ratios are now 3.9 to 1 on the roadster and 4.3 to 1 on the other models.

Brakes, steering gear, and front axle remain virtually unchanged. The frame, however, is 9 1/2 in. longer than on the 70, now being 170 in. overall. With the longer frame, longer springs are used both front and rear. The 40 1/2 by 2 in. front spring represents an increase in length of 5 1/2 in. and 1/4 in. in width. Rear springs are 6 1/8 in. longer, now being 57 3/4 in. between spring eyes and 2 in. wide. Rear springs on all models except the sedans have had one more leaf added, while the increased front

spring width has enabled a reduction from ten to nine leaves. The new springs are of the dry leaf type, lubrication not being recommended.

As formerly, 18 in. wood wheels with 30 by 6.00 balloon tires are standard. Engine and chassis accessories include a Ball and Ball carburetor fitted with an electric heating element controlled by a button on the steering column bracket, and taking gas from a 16 gallon fuel tank. Electrical units are of Delco-Remy manufacture with double filament headlight bulbs in drum type headlamps, and a 100 amp. hr. Willard storage battery.

Two-tone color schemes, with double belt moldings are used on the closed cars. On the roadster a single reddish striped molding separates the two colors, with another stripe at the bottom of the body panels, and two vertical stripes one on either side of the doors. Exterior appearance on the roadster has also been bettered by having the rear deck entirely flat, eliminating the former rise at the junction with the top.

Inside the closed cars, there is a new mohair upholstery—in two-tone finish on the Royal Sedan.

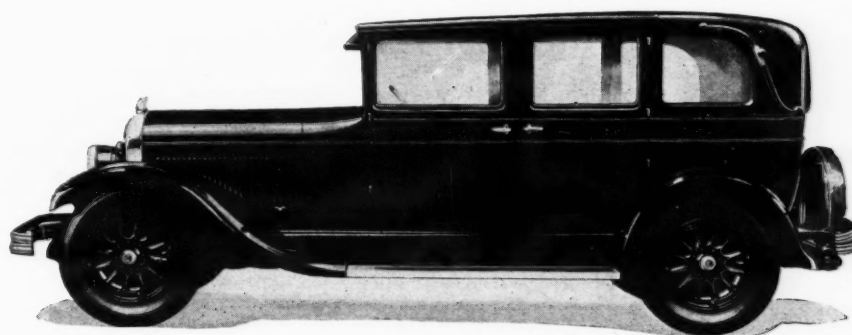
On the sedans arm rests are used in the rear quarters, these being fitted with ash trays and metal hand grips in harmony with other hardware fittings, in place of the usual assist cords. The metal moldings below the window sills in the doors, are pointed downward in the center, door panel designs

New Models Offered:

2-4 pass. Roadster	\$1,495
2-4 pass. Coupe	1,545
4-pass. Coupe	1,595
5-pass. Close Coupled Sedan	1,595
5-pass. Royal Sedan	1,595
5-pass. Crown Sedan	1,745
2-4 pass. Convertible Coupe	1,745

following this curve.

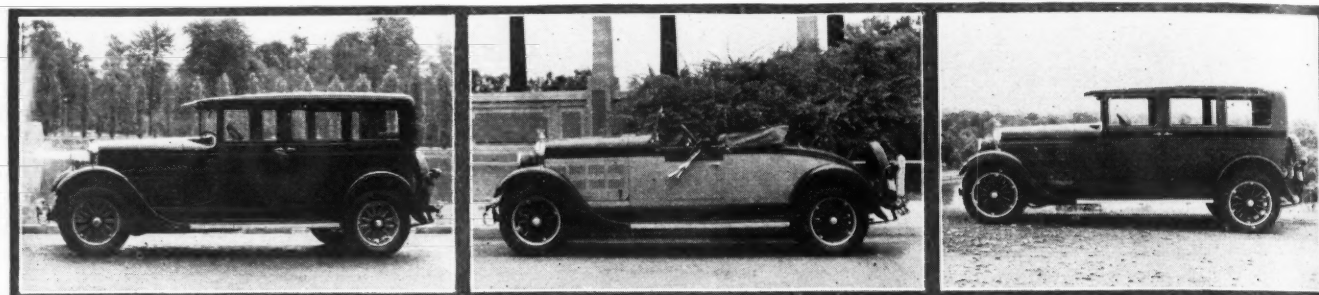
A new attractive design of instrument panel, indirectly lighted, includes an electric dash gasoline gage, and dash engine thermometer in addition to the usual instruments. The Fedco number plate is mounted above this panel in plain view, while the choke and manifold heat control buttons are below the panel.



Most complete appointments feature this crown sedan

THE GARDNER LINE FOR 1928

(Continued from page 31)



One of the new Gardner 1928 models is the brougham at left which lists at \$1,895. Exceptional performance of the Series 85 roadster (center) is partially accounted for by the fact that this car, weighing 3040 pounds, has a 74 hp. engine giving 1 hp. for each 41 pounds of car weight. The five-passenger Series 85 sedan at right lists at \$1,895

are walnut panels. Four-wheel brakes of the mechanical enclosed type, balloon tires, tilt-ray headlights, remote control door locks and indirectly illuminated instrument board are among other features of this model. The finish is in two-tone lacquer.

Series 80 cars continue without mechanical changes. However, equipment that had previously been designated as de luxe is now considered as standard at the prices quoted, which are: Five-passenger sedan \$1,795; four-passenger victoria and five-passenger sport coupe \$1,745; four-passenger roadster \$1,595.

These cars have ventilating windshields, Chase mohair upholstery, French pleated, walnut trim on doors, window ledges and instrument board, double filament headlights, distant control door locks, full walnut steering wheel, snubbers, automatic centralized chassis lubricating system, and four-wheel brakes.

Special equipment includes a gasoline gage on the instrument board, rear view mirror, stop light, automatic windshield wiper, heat indicator on instrument board, tire cover, bumpers both front and rear, air cleaner, gasoline strainer, oil filter and thermostatic heat control.

All cars are finished in two-tone lacquer, and have nickel-plated radiator with the characteristic Griffin ornament on the filler cap.

Five models are offered in the Series 85, which has a more powerful engine and which features power and performance. Here, at \$1,895, are the five-passenger sedan and four-door brougham. The four-passenger victoria and the 5-passenger sport coupe list at \$1,845. The four-passenger roadster lists at \$1,695.

The wheelbase of these cars is 122 in. and the engine has a bore and stroke of $2\frac{7}{8}$ by $4\frac{3}{4}$ in. To handle the increased power of this engine newly designed axles of very heavy construction are used.

The closed models are upholstered in Chase Velmo with artistically patterned seats and backs. The sides and top are in solid colors. The silk curtains, toggle grips and floor carpets are all in the same color to harmonize with the rest of the interior. The equipment of the Series 85 cars includes practically all items supplied on the Series 75 and 80 models.

The roadster weighs 3040 pounds, and as the engine used in the 85 models develops 74 hp. there is 1 hp. for every 41 pounds of car weight.

Outstanding in the Series 90 Gardners, which are referred to as the "aristocrats" of the line, is the fact that these cars may be had with four-speed transmission. This is optional equipment and an extra charge of \$100 is made for this item.

Powered with a $3\frac{1}{4}$ by $4\frac{1}{2}$ engine developing 84 b.hp.

at 2900 r.p.m. these models are by far the most powerful cars offered by Gardner. Both models of this series—a five-passenger sedan and a five-passenger brougham—list at \$2,295. The exterior of these cars remains practically unchanged, but much attention has been given to the inside.

These cars include the following equipment: Watson Stabilators, front and rear, automatic windshield wiper, bumpers, three-way stop, backing and tail light, trunk on the brougham, tire cover, thermostatic heat control with heat indicator on the instrument board, new style vibrator type horn, air cleaner, gasoline strainer and oil filter.

All models of the Gardner are now protected with the Fedco theft-proof numbering system with Loss-of-Use insurance that pays \$5 a day for the first 30 days after a car is stolen.

Fishing for Fish and Prospects

(Continued from page 27)

We did not discuss the matter with Pop, but he probably reasoned in this fashion: "There are a lot of fish in this here bay. They are just as likely to be in one place as another. I'll try it here. If there is one here there is bound to be more. And, besides, every time I move around I am taking just that much time away from my fishing."

Do we need to draw a diagram to show the application of this reasoning to salesmanship?

Without knowing if, of course, Pop was using a line of reasoning that has been practiced for years by the most successful advertisers, the intensive cultivation of a field of known prospects, instead of moving constantly from one group to another.

And he was also following the tactics of the most successful salesman, the policy of dinging away at one group of prospects, of patiently working one side of the street, of encouraging a nibble until it becomes a bite. It is the unsuccessful salesman who abandons the old prospects in his constant quest for new ones, who sees more business always on the other side of the street, who scorns the nibble and casts elsewhere for the healthy bite.

Pop kept three of his fish for himself and sold us the rest, so we might make good with our wives on our promise to furnish week-end provender for our families.

If you are a car salesman, perhaps the moral of this tale for you is:—

When you have sold a car to John Umpson, your best prospect may be his next-door neighbor, Robert Dobbs.



W. E. Fowler, who meets the objection of prospects with convincing arguments

When The Prospect Balks

*at the Financing Rate,
Have You an Argu-
ment That Will
Sell Him?*

By Harold J. Ashe

ferently the granting of loans on automobile paper.

"It seems to me that what is needed to overcome the prospect's ingrown antipathy for seemingly high charges on automobile paper is a little intelligent explanation to the prospect as to what makes these higher rates," declared W. E. Fowler, manager of the Los Angeles branch of the Wm. L. Hughson Co., the oldest Ford dealer organization on the Pacific Coast.

"Ignorance on a subject does not beget a mutual understanding between two parties to a contract, nor does it make for future goodwill. It is right that these higher rates on automobile financing should prevail, but it is equally right that the prospect should know the causes that make for higher rates. Once the prospective buyer understands these causes a big sales resistance will have been overcome, and the closing of the sale, in many instances at least, becomes merely a matter of routine, for it is this financing charge that makes many a good prospect hesitate ere placing his name on the dotted line.

"Where we encounter such a sales resistance I generally talk to the prospect personally. I discuss the matter with him frankly and honestly. There is no hedging or dodging of the facts. We admit that financing charges are high—high in relation to conservative banking rates on fully secured loans. But I also strongly insist to the prospect that rates are really low in relation to the risks taken by the financing company carrying the paper.

"I make the question of financing a personal matter with the particular prospect I am addressing. I ask him
(Turn to page 38, please)

A LITTLE bit of knowledge on a subject, it has often been said, is worse than none at all. This truism has never been more surely proved than on the subject of financing. More specifically there has been a growing misunderstanding concerning automobile financing.

The typical automobile buyer—the working man or small business man—understands financing only in so far as it parallels his experience in banking and other conservative monetary transactions. His experience extends no further than the obtaining of a loan on gilt-edged bonds or real estate. Most of these money-borrowers are familiar enough with banking institutions that it does not even occur to them to make application for a loan on a questionable security. However, the one fact that stands out crystal clear in their minds is the rate of interest—6, 7, or 8 per cent—whatever the usual banking rate prevailing in their respective states.

Comes the time for this typical working man or small business man to buy an automobile and he automatically proceeds to consider automobile financing in the light of his experiences with banking institutions, without consciously realizing that the banking officials, themselves, would be inclined to view dif-

W. E. FOWLER, of Los Angeles, argues that what is needed to overcome the prospect's ingrown antipathy for seemingly high charges on automobile paper is a little intelligent explanation to the prospect as to what makes these higher rates. When he encounters such sales resistance Fowler discusses the matter frankly with the prospect and shows him just why rates are high in relation to conservative banking rates and fully secured loans.

Here are his arguments.

Are You

*It Was All Right Back in the
Do Their Tasks With Very Little
Their Best Under the Circum
for the Modern Mechanic
With the Small Tools That Incr*

By S. G.



BACK in the stone age, when clubs were trumps, one man was about as skillful a chariot fixer as his neighbor. And neither was good. You wouldn't be, if you had to do everything with a stone hammer and a flint chisel. There are mechanics today who are trying to get along with the scantiest of small tool equipment. In some respects they are similar to the man of the stone age. There was an excuse for him. He had

Primitive or Modern?

Stone Age for Our Ancestors to Equipment; They Were Doing stances. But There's No Excuse Who Fails to Equip Himself ease His Efficiency and Output

Swift



to work without tools. The modern mechanic doesn't.

Bob Berry, who started with one repair shop a year ago last April and now operates three, has the reputation of paying his mechanics

larger wages than are paid by any shop in his town. He states that he owes much of his success to two things: One, the fact that his shops have always been fully equipped with the best of time and labor-saving tools, and two, that he has never hired a man who could not show him a complete kit of carefully selected and well-kept small tools and appliances.

There are four reasons why every mechanic and every employer of mechanics should make a hobby of having the best of small tools always available and in proper condition, and enough of them to make it possible for every job to be done without having to make one tool do the work that could more quickly be done by another.

The first reason, of utmost importance at the present time when nearly every shop worth working in is operated on the flat rate plan, is the fact that dependable small tools make money for the user. The "one-wrench" mechanic pays many times over for the tools he doesn't have; he loses enough in wasted effort to pay for the best kit obtainable. And if the mechanic loses money through using inferior tools, how much more does the proprietor of the shop lose?

HERE are four reasons why the mechanic should use good small tools and appliances:

1. Because, where nearly every shop worth working in is operated on the flat rate plan they help the user to make more money.
2. Because they cost less than lower priced ones by reason of the fact that they last longer.
3. Because they allow the mechanic to do more work easier and in less time.
4. Because a good kit of tools is a ticket of admission to a job in any good service station in the country.

Secondly, good small tools, regardless of what they cost, are the logical ones to buy, this for the reason that the well-made tool will outlast a dozen poorly made ones, hence costs less. Good tools are an investment, not an expense.

So much for reason number two. The third reason, one that also interests the shop owner as much as it interests his mechanics, is that the man who works with properly designed, well-balanced tools or small appliances, gets more work done and is less tired at the end of the day than the mechanic who works with makeshiftes that put him out of temper and keep him from doing his best. And the properly equipped workman saves time, not only because he is equipped to save time, but also because he does not have to waste time running all over the shop to find someone soft-hearted enough to lend him the tool he needs and happens not to have.

The fourth argument in favor of having a complete outfit of small tools and appliances, of interest solely to the mechanic, is the fact that such an outfit is the best ticket of admission to those service stations that pay the real money. The workman who can show a proper outfit of small tools that bear evidence of having been carefully cared for and correctly used, can always step into a good paying job with all the overtime he wants.

The mechanic who takes pride in his work, to whom it is a vocation, rather than an avocation—which means the difference between a life job with a future and something to while away time with until other work turns up—will always be found with a complete outfit of the best of small tools and appliances. He is just as proud of his tools as he is of his ability to use them.

Men such as these are true craftsmen. They have the skill to do things in a workmanlike manner. And they know good tools. They don't depend on the five-and-ten for their source of supply; neither do they spend their money with the wagon jobber. They want dependable tools and they don't care how much they pay for them, so long as they are good.

Every mechanic worthy of the name should have the right kind of tools with which to do the job right. The adage that a good workman never quarrels with his tools was all right a long time ago. Today good tools

ARE YOU PRIMITIVE OR MODERN?

frequently make all the difference. With them a mediocre workman becomes a good mechanic; a good mechanic becomes a better one.

And if it is important that the workman have good tools, how much more important it is that the service station owner also have the right equipment with which to work. The repair shop that is not equipped to make a profit—and this means small hand tools as well as heavier equipment—is in exactly the same position as the workman who is likewise unequipped. It cannot compete with the shop across the way that is thoroughly lined up to handle all jobs in the quickest time.

The proprietor of the poorly equipped shop may work hard to make a bare living, while the proprietor of the well-equipped shop, working no harder, will make money, for the reason that he can do three jobs while his competitor is doing one.

The service station operator should see to it that his shop is properly equipped with every wanted small tool and appliance. It is to his advantage to do this, because only by so doing can he make money. And since he can prosper only as his employees prosper, he should see to it that they also are properly equipped.

Many shop owners, realizing the importance of the foregoing and sincerely endeavoring to put their shops in line by stocking them with the necessary small tools and kindred appliances, have nevertheless failed to do this in the way that would guarantee them the best results. This has been because they have obtained their needs from peddlers and other sources that have had no interest in their welfare and have also allowed their mechanics to buy from the same "back door" salesmen. As a result they have acquired tools of doubtful origin, made, like the brooms in the old rhyme, "not to use, but to sell," that have cost them many times more in the long run than the price they paid for them.

There was no need for them to do this. Good small tools and appliances are available in any wanted amount from established automotive jobbers, who will protect the best interests of those that do business with them. It is to their own interests to do this because the degree of their customers' success is what decides the extent to which they in turn will be successful.

Don't buy cheap tools—they're expensive. Good, dependable tools are not.

When the Prospect Balks

(Continued from page 35)

whether he would lend a friend \$600 toward buying an \$800 car, at a 6 per cent rate. I point out to him that in making such a loan, he would, as a cautious businessman, need to consider the matter of an accident to the car, which might wipe out the entire security on the loan; that the security is rapidly decreasing, whereas real estate, though banks will loan only 50 to 60 per cent on its appraised valuation, is increasing all the time. I stress the fact that the automobile, by very hard usage, carelessness, etc., might in reality decrease in value to a figure

lower than the amount of the loan. I point out that a repossession might be necessary to protect the prospect's loan, and that this would mean a partial loss to prevent a complete loss. Because of these various avenues of risk, I point out that, inevitably, the astute businessman would insist on the normal rate of interest, plus an additional charge sufficient to take care of the losses sustained in the course of lending to several persons, some of whom would not be profitable.

"Most people, I have found, are reasonable. The mere fact that they are not fully posted on a subject does not make them averse to learning. Once I have directed his attention to the various factors that the automobile financing company must consider in fixing its charges, I find that the prospect is agreeing readily with me that financing charges are reasonable in relation to the risk and the service performed.

"However, I do not rest my arguments at this point.

"Ten or 12 years ago, as all automotive men know, the partial payment plan of purchasing automobiles

MOST people, I have found," says Mr. Fowler, "are reasonable. The mere fact that they are not fully posted on a subject does not make them averse to learning. Once I have directed his attention to the various factors that the automobile financing company must consider in fixing its charges. I find that the prospect is agreeing readily with me that financing charges are reasonable in relation to the risk and the service performed. I find the prospect in an entirely different frame of mind. He buys and he stays sold."

was just coming into vogue. At that time, cars now selling for \$600 or so were being marketed at twice that figure. This, of course, was because of the small production schedule at the factories, as compared to today. Small production naturally meant higher production costs, and these costs perforce had to be borne by the ultimate consumer.

"Financing, and financing alone, I insist to prospects, has brought about a condition of vastly increased buying on the part of the general public that has resulted in increased production, and the latter in turn has made for lower prices

shared by the public. Where there was one man 12 years ago who could buy a \$1,000 car for cash, there are, today, 100 men who can buy the same type of car for \$600 by the financing plan.

"Were it not for this present method of financing it is doubtful if America would be much more completely motorized than most of the European countries. Instead of the automobile being limited to the man with a \$5,000 income, we find it being limited to those of at least \$100 a month incomes, which means that practically every one can purchase an automobile on the deferred payment plan.

"Of course, the automotive men being so close to these facts do not seem to realize that they are a weapon with which to break down sales resistance of the hardest sort. After such a complete explanation of the various aspects of the financing business, its causes, and its results, coupled with the personal application, I find the prospect in an entirely different frame of mind. He buys and he stays sold."

Graham Adopts 6-Cylinder Engine and 4-Speed Transmission

Two-Ton Model is Only One Having Larger-Sized Powerplant. Price Raised \$150. Redesigning Aims at Improved Performance, Greater Reliability and Increased Comfort

By Athel F. Denham

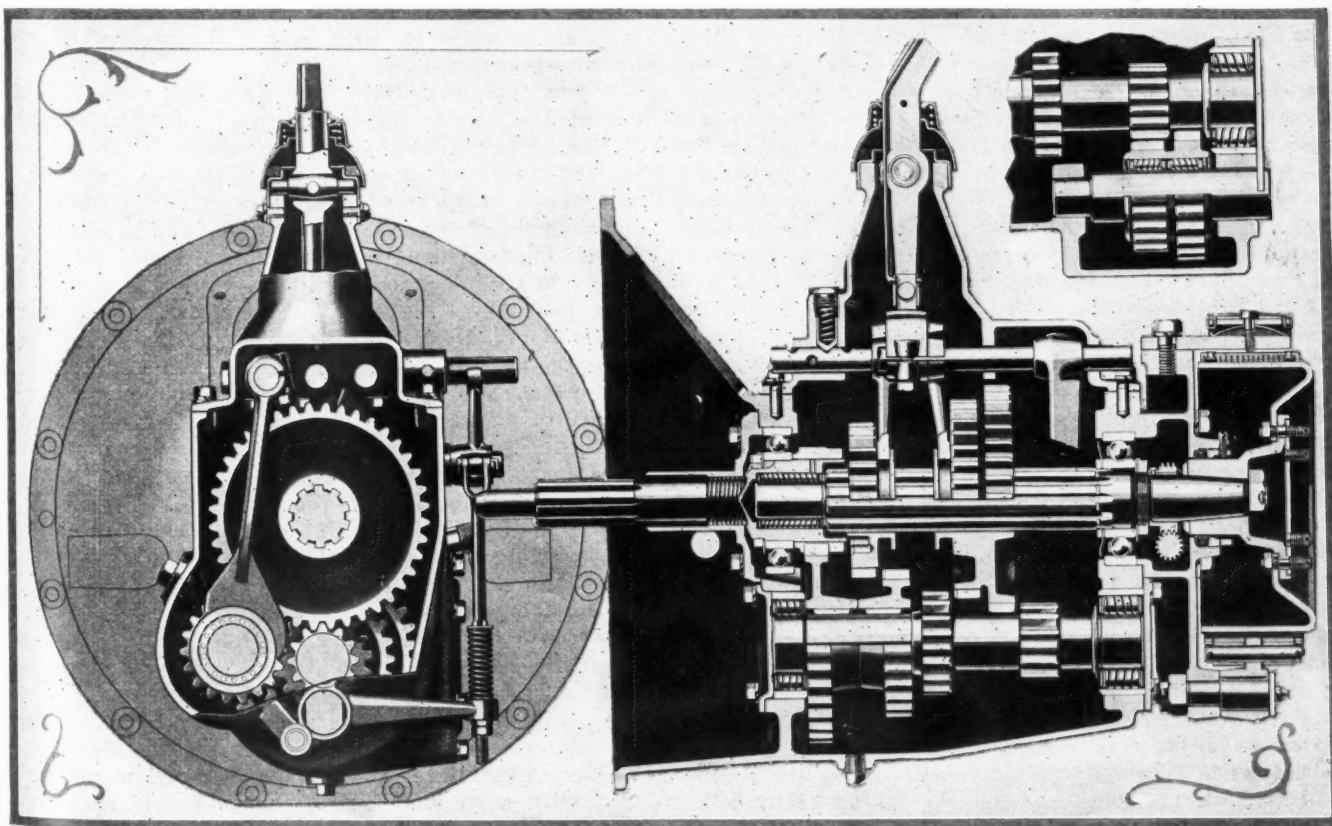
WHAT may be characterized as a new line of trucks is now in production at the Graham Brothers plant. As previously, capacities range from $\frac{3}{4}$ to 2 tons. Four-wheel brakes, four-speed transmissions, and a six-cylinder engine feature the 2-ton model; four-wheel brakes and a four-speed transmission are also being used on the $1\frac{1}{2}$ -ton model. Cam and lever steering gears are now standard on all chassis.

Improved performance, greater reliability and increased comfort for the driver were the objects aimed at in redesigning the trucks. The price on the 2-ton model with its six-cylinder engine and other new equipment, has been raised \$150, and there has been an increase of \$10 in the price of the 1-ton model, oc-

casioned by the substitution of eight-ply for six-ply 30 by 5 in. tires, while prices on the $\frac{3}{4}$ and $1\frac{1}{2}$ -ton models remain the same. The 2-ton chassis is furnished in three lengths of wheelbase, viz: 162 in., 137 in. and 114 in., the latter being the Roadbuilder.

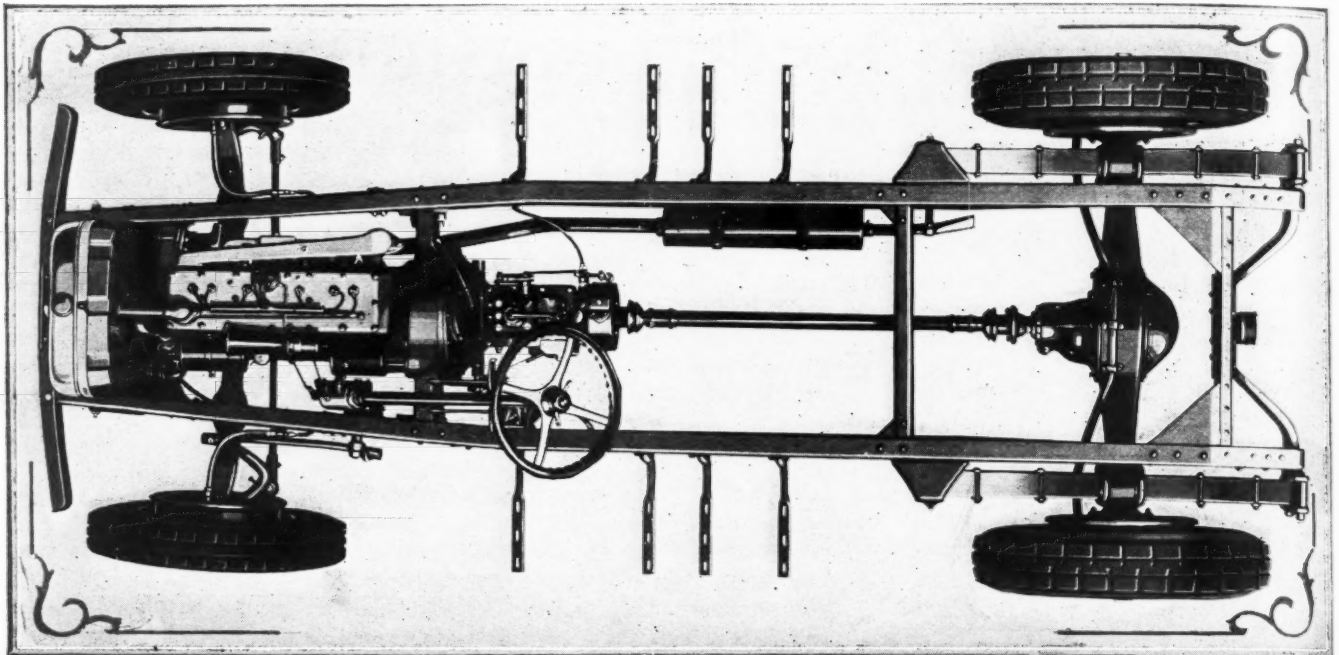
The $1\frac{1}{2}$ -ton chassis is also available in wheelbase lengths of 162 and 137 in., while the $\frac{3}{4}$ -ton and 1-ton models come in wheelbase lengths of 116 and 126 in. respectively. These models continue to be fitted with the Dodge 124 engine recently adopted for Graham Brothers trucks. Two-wheel brakes and three-speed transmissions are continued on the two smaller models without change.

The six-cylinder engine used in the new 2-ton model is practically identical with that used in the Dodge



Sectional views of the four-speed transmission adopted on the Graham Brothers' $1\frac{1}{2}$ and 2-ton models. The transmission and single-plate clutch are built in unit with the engine. The transmission has standard shift

GRAHAM ADOPTS 6-CYLINDER ENGINE



Top view of the new 2-ton Graham Roadbuilder chassis. Note the one-piece propeller shaft with ball-type universal joints

Senior line and is built by the Continental Motors Corp. A governor is added however, and a larger truck-type fan is used.

Built in a unit with the engine is the single plate clutch and four-speed transmission, which latter has standard shift. The main shaft has 10 splines, is machined from nickel steel, and is mounted on ball bearings except for the Hyatt roller bearing on the pilot. The countershaft and reverse gears are carried on roller bearings. Gear reduction ratios are as follows: Low, 6.5 to one; second, 4.0 to one; third, 2.08 to one, and reverse, 7.58 to one. An opening is provided on the right side of the transmission case for a standard power take-off, such as is used for dump bodies, hydraulic pumps, etc. All gears are of alloy steel, heat treated and lapped in pairs to insure quiet operation.

Propeller shafts on the standard 2-ton models are of the two-piece type with three Universal Products, ball-type, universal joints. On the Roadbuilder a single piece shaft is used, incorporating the same type of universals. Axles on the 2-ton are of new design, with cast steel housing and alloy steel shafts 5/16 in. larger in diameter than formerly. Wheel bearings also have been increased in size, while ring gear and pinion tooth faces have been lengthened.

Lockheed hydraulic four-wheel brakes, of the latest design, incorporating an automatic refilling tank surrounding the master cylinder, are used on this model, as well as the 1½-ton truck. Drums are 16 in. in diameter, with expanding shoes, taking 2¼ in. lining. A transmission brake has been added, with a drum of 8-in. diameter and 3-in. width.

With the adoption of front wheel brakes, the front axles have been increased in section, and reverse Elliott ends adopted. Steel spoked wheels are standard on both 1½ and 2-ton models, taking 32 by 6 in. tires all around on the 1½ and front wheels of the 2-ton, the latter having 34 by 7 in. rear pneumatic tires.

For 2-ton models dual disk wheels are offered at extra cost fitted either with 34 by 5 or 32 by 6 in. tires,

in either case the same front tire size being used as on the rear, and mounted on single disk wheels.

The standard gear ratio on the 1½-ton is 5.10 to one and on the 2-ton models is 5.667 to one. On the Roadbuilder 6.375 to one is standard. Optional gear ratios are available. Frame section of the 162-in. chassis models and on the Roadbuilder now is ¼ x 7½ x 2⅞ in. with 3/16 x 7 x 2⅞ on the 137-in. wheelbase chassis.

A new type of radiator has been adopted for the 2-ton models. It is of fin-and-tube construction with oblong section tubes, said to increase durability, especially in freezing weather. With this radiator a new shape of nicked shell is used, the higher radiator raising the hood and enhancing appearance.

The 1½-ton model which differs from the 2-ton chiefly in having a four-cylinder engine, is also fitted with four-wheel brakes, a four-speed transmission and heavier axles. Specifications of these units are the same as for the 2-ton units. Other differences between the two models are in the number of leaves in the springs, and in tire sizes.

On the ¾ and 1-ton models, the chief changes are the adoption of a cam and lever steering gear manufactured by Ross Gear & Tool Co., the use of heavier section front axles, adoption of eight-ply instead of six-ply pneumatics on the 1-ton and the offering of a special gear ratio of 4.25 to one on the 1-ton model.

A number of changes have been made in the cabs to increase comfort. Cushions are now air bound, which while making the seats less resilient, increases riding comfort by decreasing jouncing effect. A one-piece windshield has been adopted on all cabs, and the front of the tops lowered as a result. Seats are also somewhat lower than formerly. All models are fitted with cowl ventilators, rear view mirrors, and automatic windshield wipers. Front bumpers, integral with the frame are furnished on all except the ¾-ton model. Complete body lines similar to former offerings are available on the new trucks.

Fafnir Develops Shackle of the Ball-Bearing Type

Is Designed to Eliminate Rattles and Squeaks and is Said to Require No Adjustments and Lubrication Only at Intervals of 25,000 Miles

TO overcome the various disadvantages of conventional spring shackles, a ball-bearing shackle has been developed by the Fafnir Bearing Co., New Britain, Conn., which requires no adjustments, eliminates rattles and squeaks, and calls for lubrication only at long intervals. At the free ends of springs, these shackles are interchangeable with standard types, while at the front end a slight redesigning of frame brackets is necessary when adapting the shackles for original installation.

The free end shackle assembly includes two hardened pins of chrome-molybdenum steel, pressed directly into the spring eye and the frame bracket respectively. At their ends, where the pins are of smaller diameter, they carry Fafnir radial-thrust ball bearings held in case-hardened cups, mounted in pressed steel links. Reference to the accompanying detail photograph gives a clearer idea of the general construction. The ball bearing cups are provided with two dust washers, one on each side of a felt oil retainer, the felt being kept against the pin by means of a coiled wire spring around the outside.

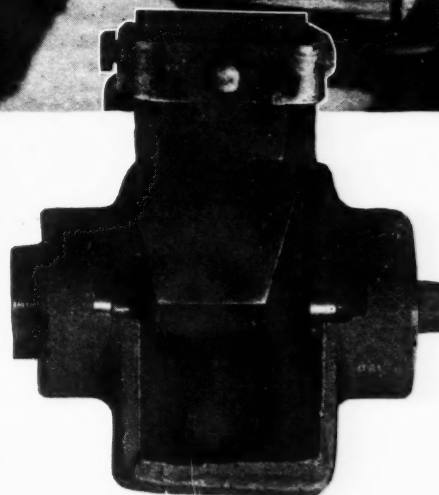
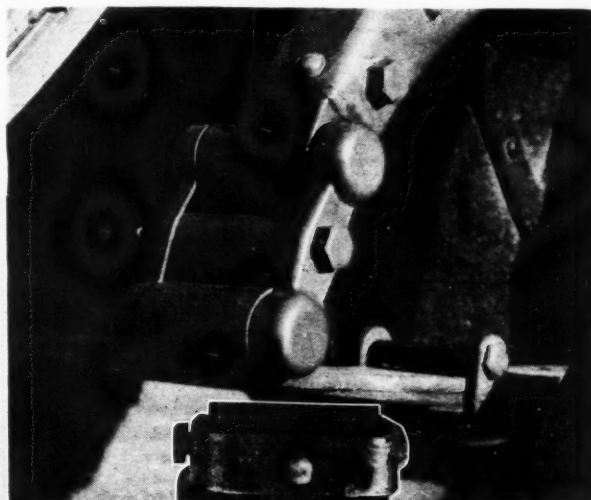
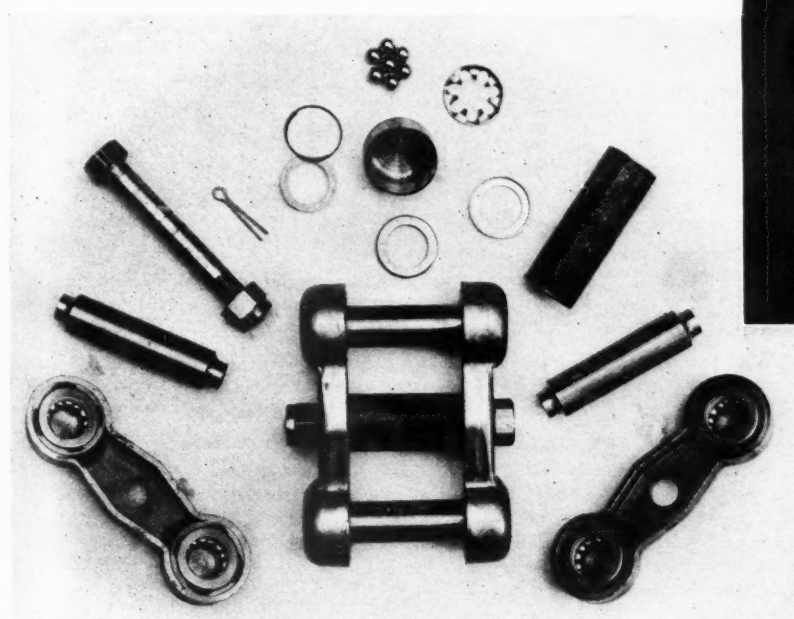
The pins are of such length as to prevent contact between the links and bearing cups on the one hand, and the spring and frame bracket on the other, and all thrust as well as radial load is taken by the bearings,

preventing wear in other parts. In smaller sizes the pins are provided with shoulders to space the links relative to the pin ends and bearings, while in the larger sizes a tubular steel spreader is used between the pins, the assembling belt passing through this spreader. This spreader is made rather large, so as to insure rigidity of the shackle after assembly.

Bearing cups are packed with lubricant on initial installation. Operation of cars equipped with these shackles is said to have shown that, owing to the use of the felt retainers, no additional lubrication is required for periods of 25,000 miles and upward.

When the shackles were first designed it was thought that all the load might be carried on one or two of the balls. However, running tests with sectioned shackles showed that the bearing has a distinct tendency to rotate in the cup, thus distributing the wear.

(Turn to page 49, please)



Above—One of the Fafnir ball bearing shackles and component parts. Right, top—One of the shackles on test car showing clearance between links and spring and frame eyes to prevent side wear and friction, and (lower right) method of installing ball bearing shackles on spring front ends, showing integrally forged spring hanger bracket

Making the Most Out of the Available Space

When the Lot is Out of the More Approved Proportions or "Off Size," Care Must Be Used in Planning to Cut Down Waste Space

By Tom Wilder

HAVING seen some of your floor plans for general garage use, I am writing for suggestions for a garage I am planning to build.

We will do painting, trimming, body and fender work and general motor repair with machine shop in connection. Also washing and greasing and tire repair with some accessories and parts.

Am sending outline of building with correct dimensions showing corners and other buildings around. Also what is your opinion of setting the building back off the regulation building line?

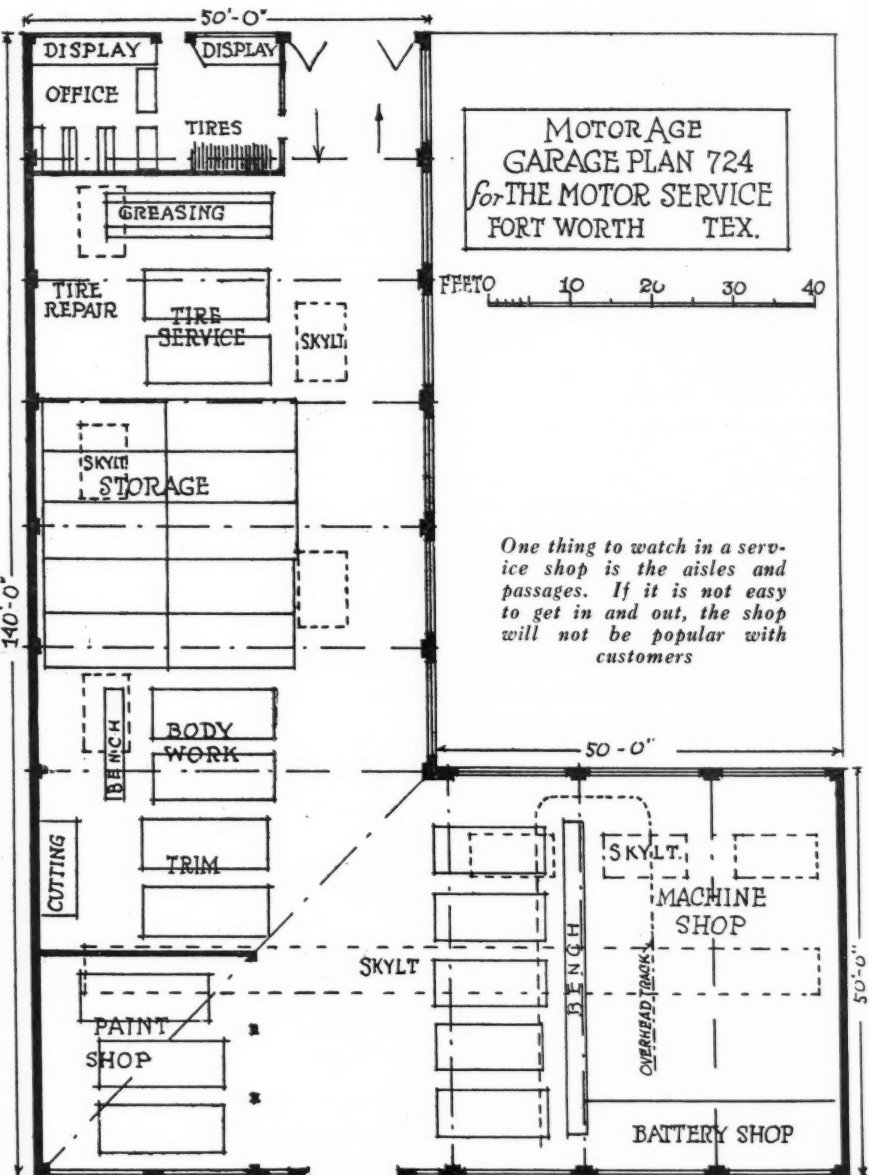
Here is a list of equipment to be used: 1 con rod rebabbiting and reaming machine, 1 combination wood working machine, 1 piston grinder, bench type, 1 14-in. lathe, 1 30-in. lathe, 1 milling machine, 1 wet or dry grinder, 1 power hack saw, 1 20-in. superior drill press, 1 large stationary forge, 1 Heald cylinder grinder, 1 30-ton hydraulic press, 1 air compressor assembly, 1 burning end stand, 1 battery charging equipment, 1 electrical test stand, 1 Lange edging unit "Glass edging unit," 1 acetylene welding equipment, 1 piston lathe, bench type.

We would like to have your suggestion for overhead hoists and lifts, also work and greasing pits.—J. L. Snead, The Motor Service, Fort Worth, Tex.

THE property you have is not so very well adapted to the business you intend to conduct. A building 50 ft. in width is suited to storage better than anything else. To be the most efficient, it should be 60 or 65 ft. wide, then there would be space for a 20 ft. center aisle with service space on both sides.

In this layout the aisle has been placed at one side with service spaces on the other. This leaves more space than necessary but the space in front of the cars has been utilized for shops as shown, for tire repair, wood working and cutting bench and machines. In the paint shop the extra space can be used for spraying hood for wheels and fenders.

Since you have considerable machine shop equipment, the end of the ell or wing has been reserved for it. Here it will be by itself, out of the way of other departments and have more space than could be given to it in any other position. An overhead track with conveyor and chain hoist will enable you to remove engines for complete over-



haul and take them to the machine shop with very little trouble.

For greasing you could use an elevating rack or a pit. A good type of the former like hydraulic rotary lift or a power lift would be preferable to a pit but also more expensive. We would not recommend pits for underside work in the repair shop but if you have an overhead track it should be strong enough so that the front or rear of a car could be raised and horses placed under axle or wheels.

It would be very nice to set your building back if you can find any place where you can sacrifice anything. As we see it, you are already short of space to give all the different services you have listed and it is very important to have a little storage space for cars finished and awaiting service.

A wash rack has not been provided for and the only recommendation we can make is to put it in the storage space so that when not in use it will still be storage space.



Too Late to Start? *Certainly Not!*

Embrace This Opportunity to Vote for Your Favorite Jobber Salesman

Help Him Win a Major Part of the \$2,075.00 Cash
Which is to be Awarded

Read the Conditions of Contest—Make Every Vote Coupon Do Its Bit

THERE will be twenty-seven jobber salesmen among whom \$2,075.00 in cash will be distributed.

In each of the nine trading zones of the United States, the salesman who polls the greatest number of votes will receive a cash prize of \$100.00. The second highest in each zone will receive \$50.00, while the third highest in each zone will receive \$25.00.

A Grand Prize of \$500.00 cash will be awarded the salesman who polls the highest number of votes of any salesman in any of the nine zones. This \$500.00 prize is in addition to the zone first prize of \$100.00.

These twenty-seven men will be the ones appreciated for their sales ability and efficiency by the retailers of automotive products. Throughout the United States, in the nine trading zones shown by the outline map, all men who are subscribers to, or readers of, *Motor Age*, *Automobile Trade Journal*, *Commercial Car Journal* and *Chilton Catalog & Directory*, may use the coupons which appear in current issues.

Votes are now rolling in daily from all zones. Many of the nation's tradesmen are showing a keen interest. Their votes demonstrate that their concern in the welfare of the jobber salesmen who contact with them is something real. They are anxious that the \$2,075.00 in cash awards go to the most deserving.

As a tradesman qualified to vote we urge you to do your part. Send in your coupons promptly and regularly—make every vote coupon do its bit!

MOTOR WORLD WHOLESALE Popularity Contest for Wholesale Salesmen

Contest Editor
Motor World Wholesale
Chestnut and 56th Sts., Philadelphia

In the wholesale automotive salesmen's popularity and efficiency contest I vote for:

Name of salesman

Name of his firm

His firm's address

Your signature

Your firm name

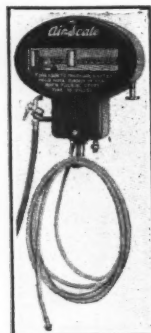
Address

M. A., August 18—This ballot is good for ONE vote.

New Accessories and Devices

Garage Air Scale

THIS is a wall type air scale, manufactured by the Air-Scale Company of Toledo, designed especially for garages, tire shops, sales agencies and for all indoor installations that require conservation of floor space. It provides



clean, filtered air at any desired pressure and is reliable and accurate. A feature of this scale which has made it widely popular, is the fact that one merely sets the indicator to the air pressure desired and when the pumping stops the tire is filled to that pressure.

This scale has a capacity for the largest size pneumatic tire, which it will fill in a few seconds with exactly the same ease with which small tires may be inflated.

A feature of the Air-Scale is the fact that it is provided with what is known as a water trap. This effectually does away with condensation, that forms in all compressed air, being blown through into the tire.

Model D lists at \$75; Model DW, which is designed with a water connection and 8 ft. of best grade water hose with nickel fittings and thumb operated faucet or valve, lists at \$80.

Brown & Sharpe Micrometer

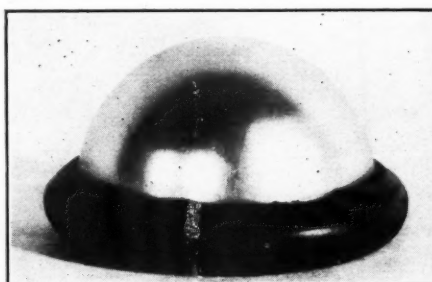
THE Brown & Sharpe Micrometer No. 11, made by Brown & Sharpe Mfg. Co., Providence, R. I., has new and desirable features. Adjustment for wear on its measuring surfaces are quickly and positively made. The adjustment, when made, is locked. There is nothing to slip or loosen.

The opening in the frame of No. 11 is enlarged by the new shape of the frame at its anvil and spindle ends, making possible many measurements not obtainable with the usual type of micrometer. The small size of the frame at its anvil end adapts the micrometer for measurements in narrow slots. The increased inside width of the frame accommodates odd-shaped pieces having projections and recesses.

The accuracy and workmanship of No. 11 are distinctly in accordance with Brown & Sharpe standards. Measures 0 to 1 in. by thousandths. List price, \$6.25; with ratchet stop, \$6.75. Leather case \$1.25.

Motoscope

THE Motoscope is a fascinating new and most useful novelty for the automobile, developed to meet the increasing need for a reliable, convenient indicator of traffic signal changes. It



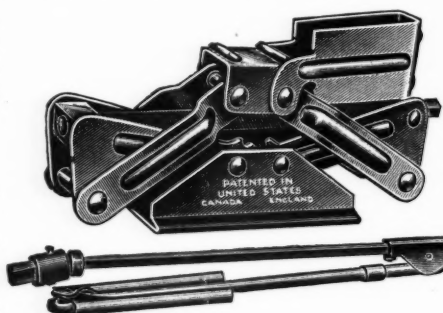
also affords an ever changing panorama of passing scenes, every street light being reflected, together with wayside objects in the silvered dome.

This item attaches to the cowl of the car where it does not interfere with the vision in driving and reflects traffic signals from any angle, without adjustment. Attachment is made either by passing a bolt through the metal of the cowl to the rubber base, or by using an application of waterproof glue. The Buffalo Forge Co., Buffalo, N. Y., is the originator of this device.

Master So-Lo Jack

THE Master So-Lo Jack, manufactured by the So-Lo Jack Co., Inc., Attleboro, Mass., may be used at any height from 4 1/4 in. to 16 1/2 in. giving it the lowest and highest starting points needed for any car.

The scientifically designed lifting principle consists of a rugged lifting screw which is turned by a handle that



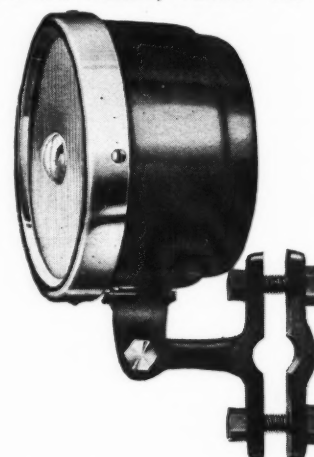
unfolds to 36 inches, transforming the jack from a flat, low-lying diamond shape to a tall diamond shape. It cannot slip and returns to the low point only when the handle is turned. This jack is built throughout of steel and has an exceptionally broad foot to prevent digging in when used on soft ground.

A feature of this jack is the fact that where the handle attaches to the jack itself there is a combined rigid universal joint. When placing the jack under the car the rigid feature is used. The entire jack is thus easy to control and place accurately without the necessity of coming in contact with the greasy, dusty "underpinnings" of the

car. Once in place, a light pull on the handle converts the joint into a perfectly flexible "universal" which lets the user stand in an easy, natural position while operating it. A slight push makes the jack rigid again when ready to be lifted out. List price \$6.

Fyrac Road Light

THIS is a road light, manufactured by the Fyrac Division, National Lock Co., Rockford, Ill., that may be attached through the radiator, on the lamp bracket, between fender and radiator, on the lamp crossbar, under or on top of the fender, outside the wheel



over the axle, on bumper bracket or chassis brake rod.

It may be adjusted to suit the individual desire. Rays can be pointed so that pavement line and road surface are thrown into sharp relief without reflecting on the hood or interfering with the vision of oncoming drivers.

Material and prices of the three models are as follows: Model No. 65, solid brass full nickel plated with nickel plated brass visor, \$7.50; model No. 650, solid brass full nickel plated without visor, \$6.00; and model No. 40, pressed steel black enameled finish without visor, \$4.00.

"Klose-Kut" Hack Saw

THIS is a hack saw designed for use in close quarters where the conventional hack saw cannot be used. The rigid backbone prevents wobbling and binding and to an extent does away with breaking of blades. In addition



this saw frame is designed to use broken blades. It takes a standard 1/2 in. blade. Each saw is complete with a wave set flexible back blade. Manufactured by The Bridgeport Hardware Mfg. Corp., Bridgeport, Conn.

READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

Wants 100 M. P. H.

I was referred to you by the Chicago Motor Club for the following information and shall appreciate very much anything you can give me on the subject.

What is the gear ratio and speed of a Pathfinder, 1917 model, with a Wideley engine—Twin Six and overhead valves. If it is geared low and will not develop high speed, what is the best thing to do to make it go about 90 or even 100 miles an hour, as an engine of this kind and size should be able to develop extremely high speed. Would increasing the speed interfere with smooth action of the engine and stop it from rolling along at the rate of 5 or less miles an hour, while in high?—Georges Maniloff, Room 205 Auditorium Bldg., 431 S. Wabash Ave., Chicago, Ill.

THE gear ratio of this car is 4.33 to 1. At least, that is standard equipment and is the ratio which you have, unless someone has changed the rear axle gearing since the car left the factory. You will appreciate that such a car is now 10 years old, and it is entirely possible that considerable changes have been made in it and also that the engineering in such a car is not up to present-day standards. The speeds of today were not thought of ten years ago, and we doubt if you will ever be able to get 90 or 100 miles an hour out of your car. Gearing alone is not the answer. It is true that a light car, such as a roadster, used in relatively level country, can stand a lower gear ratio than can a heavy touring car or sedan that is used in traffic or in hilly country, and which, as a consequence, has considerable load to pull and must accelerate or climb hills readily. You might find some advantage in your car, if it is not too heavy, in using a 4 to 1 gear, but you will appreciate that this would limit the low speed at which the car could operate smoothly in traffic. Your best chance is to have a service station go over this engine and see that the cylinder walls are in good condition and then fit the car with the latest type of aluminum-alloy pistons. You will appreciate that the pistons in an automobile go up and down at high speed and when the car is driven fast the weight of these pistons is a big factor in the performance. You might liken the pistons of a car to the shoes of a dancer or runner. Here, you will appreciate, of course, that it is impossible to move one's feet fast if using heavy shoes. Likewise in an engine, it is practically impossible to attain high speed if the pistons are very heavy. The compression of engines of today is considerably above what was recommended practice ten years ago, and it may be worth your while to have $\frac{1}{8}$ in. of material milled from either the cylinder block or cylinder head, as required, on this car in order

to raise the compression. A capable machine shop can handle this for you. Of course, in doing this work one must see that the valves are not interfered with or that the pistons do not strike any part.

Filling Cylinder Scores

Please let me know if there is a simple way to repair scored cylinders, and if there is any special solder or other material that can be used by the average mechanic. I would also like to know how to construct a simple yet efficient sounding rod, or knock detector.—J. W. Riordan, care of Diamond Route Garage, Mineral Hot Springs, Colo.

WE would not say that filling engine scores is exactly a simple proposition, but we are glad to supply by separate letter, the names and addresses of those concerns that can supply the necessary equipment and material for doing this work. If you will get in touch with them they will be glad to tell you just what is required in order to fill up the scores properly.

With regard to the construction of a sounding rod, or stethoscope, as it is called, we would certainly recommend that you purchase one outright, as they are inexpensive, and a home-made one would not be likely to be very satisfactory. The addresses of concerns making these testing rods will also be given by separate letter.

Rubber Tube Kills Vibration

Will you please give me your help on the following problems? We have a 6-45 Paige coupe and when the car is run in the neighborhood of 30 miles an hour, there is a loud singing noise that starts in the oil line and runs to the gage on the dash. This keeps up at times for an hour and then will stop and is not heard again perhaps for two or three days. Have you any idea what this could be?—Schiska Battery Shop, 115 West Warren St., Bucyrus, Ohio.

THERE is a certain period of vibration that is developed by the engine, or oil pump in it, which is evidently in harmony with the period of vibration of the dash. We have heard of cases similar to this on other cars where the trouble was easily and completely overcome by cutting away about 4 in. of the oil tube that goes to the gage on the dash and putting on heavy pieces of oil resisting rubber tubing. Of course, clips should be used on this to see that it is absolutely tight. This will absorb any vibration that might be developed.

Flat Rate Proves Successful

Some few months since we adopted your suggested Flat Rate repair schedule for our repair shop and can report that we have found it very satisfactory.

Today we adopted the percentage schedule for figuring our workman's pay and it is our desire to know what you have to suggest in this connection. It is our understanding that a 60-40 rate is commonly used, but to be sure of being in line with other electrical repair shops, we will ask your suggestion in this matter. May we hear from you right away so that we can set our labor rate in order.—Generator Service Co., 1501-03 Commerce St., Fort Worth, Tex.

WE are interested to hear that you are among the many organizations that are finding the flat rate method of selling service to be so successful. It will be of even greater advantage to you to pay your men on the flat rate basis, as they will then have a very strong incentive for producing the greatest possible results and bringing as much business to the shop as they can.

We know of electrical service stations all the way from New York to Los Angeles that use the 60-40 basis that you mention. In this, 60 per cent is retained by the shop for operating expenses and 40 per cent is paid to the men as their share. We know of other organizations that pay a 35-65 basis, but in these cases the shop supplies everything that the men use, even to overalls, and have an unusually heavy run of business, so that the mechanics' earnings are unusually high. We find in addition to the regular 60-40 basis of paying men that it is highly desirable to guarantee them a certain amount of money each week, or at specified intervals. One organization pays its men \$33 every ten days, or in other words, practically \$100 a month. On the first of the month their earnings under the flat rate basis are calculated and the \$100 which has been paid to them deducted from their total receipts, and a check for the balance given to the men. For example, if on the 10th, 20th and 30th, a certain man received \$33 and had done \$400 worth of repair work that month, he would have a credit of 40 per cent of \$400, or \$160. Deducting the \$99 which he had been paid, that would mean that he would receive a check on the first of the month for \$61. You will find that most men want to be sure of a certain amount of money, regardless of the volume of work going through, and at the same time they are willing and anxious to work hard and earn more money. We would, therefore, suggest that you arrange some system of guaranteeing a certain minimum earning. You will find that such a plan holds good men and is not an overload on the pay roll during slack times.

Ford Race Car Suggestions

One of our students has written us for information relative to the rebuilding of a Ford into a racing car. We have very little data on hand relative to the required changes that will have to be made, and as you have frequently printed articles on this subject, I thought perhaps you had such information that you could conveniently send us.

This man desires to build a first rate racing car to be used on some of the recognized tracks in this country.

I assure you that on behalf of our student, we shall appreciate any assistance that you can give us.—C. R. Strouse, Director, School of Automobiles, International Correspondence Schools, Scranton, Pa.

IN developing a racing car there are three distinct things that have to be done. The first is to get the engine in shape. In this connection you will probably want to lighten the Ford flywheel by removing the magnets, and you will also want to take out the magneto coil. The regular Ford lubricating system will be replaced by a pump that will supply positive lubrication. To get the maximum power and speed out of the engine, overhead valves should be used and in connection with this you will wish special pistons and rods, together with a stronger and better balanced crankshaft than is regular equipment in the Ford. Of course, it will be necessary on high speed work to use special ignition and a larger carburetor of racing type is advisable.

In order to utilize this increased power to advantage, it will be necessary to make the car capable of traveling at high speed with safety. This can be accomplished by lowering the center of gravity and installing wire wheels, and steering gear.

The next thing requiring consideration is a body for the car, and it is generally better to consult a body maker.

Finding an Unknown Gear Ratio

Kindly let me know how many revolutions a 1921 Hudson turns over at 49 miles an hour in second gear, with 32 x 4½ tires and 4-1/12 rear axle ratio. Also, how fast should the car travel in high gear at the same engine speed. I think I am using too high gear ratio to get the maximum speed in high.—Roy Ford, c/o Morgan's Garage, Weed, Cal.

WE do not have any information here as to the reduction in the transmission of the 1921 Hudson. We tried to get this from the Philadelphia factory branch of the Hudson Motor Car Co., but they did not have it either, so we will have to ask you to try the following in order to find the answer:

Get a hand crank for your engine and engage your racket, making note of the position that the crank takes. Then jack up one rear wheel and place a chalk mark on it and on the fender. Have a man watch this wheel while someone turns the hand crank. The car, of course, should be in second gear when this is done. Due to the differential action one wheel will turn twice as fast

Drawing Air From the Crankcase

What are the advantages, or disadvantages, of having the carburetor air intake to the crankcase of the engine. Is this as good as using an air cleaner on the carburetor? What would be the effect of an installation of this kind on the engine, and would it cause overheating?—Allen & Bowen, Centralia, Mo.

AN installation of this kind would not cause overheating. On the other hand, the oil vapor drawn in with the fuel mixture would tend to lubricate the upper end of the cylinder bore and piston. This would be of considerable advantage in the case of new cars. Also, any fuel that might be in the crankcase and drawn into a vapor would be picked up and drawn into the carburetor, and it is entirely possible that the car could be operated on a leaner mixture, and by utilizing this fuel would show a slight saving in gasoline consumption. This means of connecting up the carburetor, however, has the disadvantage in that you cannot pre-heat the incoming air to a very high degree. In summer, of course, this would be all right, but in winter the disadvantage would be considerable. This installation would not substitute for an air cleaner, as an air cleaner should be installed on the breather of the engine in a hook-up of this kind.

as if both wheels were jacked up, but for fear of irregular turning of two wheels, it is better to jack up one and then multiply your answer by two. Carefully count the number of turns of the starting crank that it takes to make the rear wheel go through one complete revolution. Suppose that it takes 3½ turns of the hand crank, your total gear reduction would be 3½ times 2, or 7 to 1. This would include the combined reduction of the rear axle and the transmission. Having the total gear reduction, it is now necessary to multiply the tire diameter—32 in. by 3.1416 in order to get the circumference. It may shorten your problem somewhat to use the tire diameter decimally instead of in inches, and in this case it would be 2.66 ft. This multiplied by 3.1416 would give the circumference or total distance traveled in one revolution. Dividing this distance in feet into 5280 ft., which is a mile, would give the number of rear wheel revolutions per mile. Multiplying this by the total gear reduction between the engine and the rear wheel would give the number of revolutions that the engine would have to turn in traveling one mile. In direct drive you would multiply by the rear axle reduction which, as you say, is 4 1/12, though

the factory branch here in Philadelphia does not recall any 1921 models that had this reduction and we would, therefore, suggest that you check this figure with the hand crank as we previously suggested, except that in this case the car would be in direct drive.

The next problem is to convert the engine revolution per mile into revolutions per minute. To change your revolutions per mile to revolutions per minute, multiply your revolutions per mile by 49 and divide by 60. If you wish to find your revolutions per minute for any other speed in miles per hour, merely multiply your revolutions per mile by the speed in miles per hour and divide by 60.

Try a Supercharger

I have a racing car shortened and lowered, equipped with Rajo eight-valve head, counterbalanced shaft, racing cam, Bosch magneto, 1¼-in. Zenith carburetor, oil pump, etc. I am using regular gears in the rear axle, and can average 70 m.p.h., but that is not fast enough for use on our half-mile tracks.

Can you suggest anything that will increase my speed? The car has 30 x 3½ tires. The engine was carefully honed and aluminum alloy pistons fitted. The field coil and magnets have been removed and four oil dippers have been placed on the fly wheel. Should I use a fan on this car? The water is circulated by a water pump.—L. L. Hurdell, Kellogg Auto Service, Kellogg, Iowa.

YOU say that you have an oil pump on this car, and we would accordingly suggest that you remove the dipper from the flywheel, as we believe the oil pump will be sufficient for even racing work, and the dippers impose considerable drag on the engine, especially at high speed. It would be well to try this car without a fan, as you can probably get along without it, and this will eliminate considerable drag at this point. Another way of reducing the load on the engine is to remove the generator or at least to ground it during a race, so that it is not charging. If you can get extremely high speed from your engine you can get better acceleration by going to a four to one gear instead of the three and seven-eleven gearing which is standard equipment on the Ford. However, this matter of gear ratio is a problem that has to be solved right on the track and cannot ordinarily be handled in any other way. Each year at Indianapolis the regular gear changing parties for a week or so before the Decoration Day races. The cars may have their gears changed several times before the gear that is most satisfactory is finally obtained. There is no doubt that the installation of a supercharger would be a big help, and we are accordingly giving you the name and address of a concern that can furnish you with superchargers for Ford cars.

We are accordingly giving you the name and address by separate letter of the concern who can furnish superchargers for Ford cars.

READERS' CLEARING HOUSE

Wills Specifications and Wiring

Can you please supply me with the specifications and wiring diagram of the Wills-Ste. Claire car, Model B-68. This information will be of great service to me and much appreciated.—James R. Frole, P. O. Box 185, Duquesne, Pa.

THE wiring diagram is being published as requested. The specifications of this car are as follows:

Wheelbase—127 in.
Tire size—32 by 6.20.
Engine—Own make.
Cylinders—8.
Bore and stroke—3¼ by 4.
Rated hp.—33.8.
Piston displacement—265.
Valve arrangement—In head.
Camshaft drive—Bevel gears to overhead shaft.
Piston material—Cast iron.

Number of main bearings—3.
Crankshaft vibration dampener?—Yes.
Oiling system—Pressure to oil bearings.
Oil cleaner?—None.
Cooling system—Thermostatic.
Thermostat?—None.
Radiator shutters?—None.
Carburetor make—Schebler.
Air cleaner?—None.
Ignition system—Delco.
Generator and starter make—Delco.
Clutch—type and make—Own, single plate.
Gear set—make—Own.
Rear axle—type and make—½ Timken.
Gear ratio—4.45.
Brakes—foot—type and location—Internal and external—4-wheel.
Brakes—Hand—type and location—Internal—Rear wheels.

Brake type—Hydraulic.
Steering gear make—Own.
Rear spring—type and length—Semi-elliptic—57 in.
Chassis lubrication equipment—Pressure.

Sounds Like Pistons

We have an Essex here that has a tap in it like a loose tappet. It is not a knock, but just a tap and is louder sometimes than others. We have tightened all the bearings in this car and installed new wrist pins. The connecting rods have been lined up, the timing chain has been inspected—the oil pump and distributor looked over.

All new valve guides and valves have been put in and the tappets are O. K. There is no play in the camshaft. In fact we have gone over everything on this car and still this knock persists, so we would like to see what you can suggest.

We work on Hudson and Essex cars exclusively, but this one has us fooled. The car has gone 4530 miles and is last year's model.—Armstrong Garage, Perth, N. B. Canada.

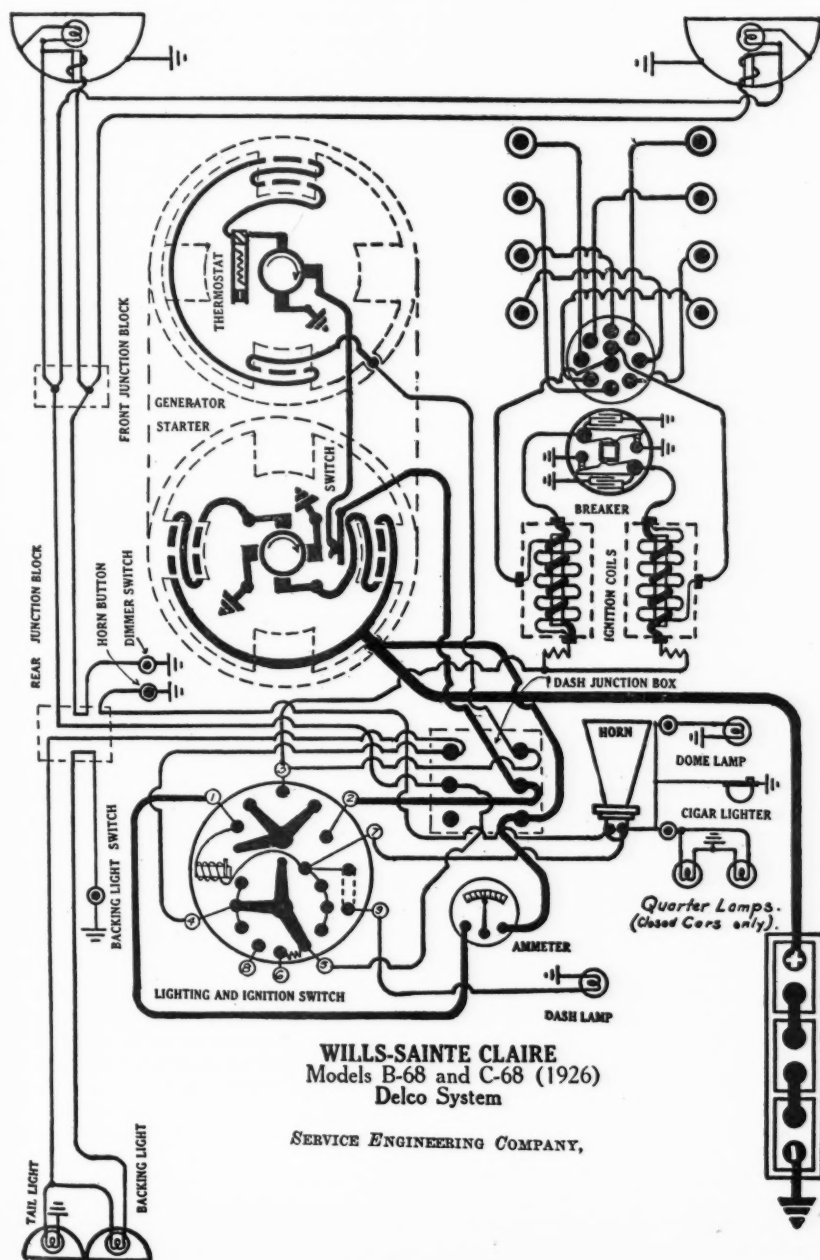
IN listing the things that you have done on this car, you mention nearly everything except replacing pistons or rings. From your remark that the knock varies from time to time, we would suggest that you check up on the pistons further, as you know these are aluminum alloy pistons and vary considerably with changes in temperature. These are of the split skirt variety and should not have more clearance than five-thousandths of an inch. In fact the pistons should fit snug in the cylinder bores when a .005 in. feeler is placed alongside of them. The cylinders should be round within two or three-thousandths of an inch and should be straight within three-thousandths of an inch. If a shoulder has formed at the end of the piston ring travel in the bore this should be honed out before new rings are fitted. We would suggest that you check the side play of your push rods by means of a dial indicator. Bring the contact point of the dial indicator in touch with the push rod, and then bring the push rod first toward the dial indicator and then away from it. The total travel should not exceed .003 of an inch, and if it does these parts should be replaced if you wish to eliminate the knock.

Bearing Replacement

IN addition to the operation mentioned in the July 7 issue of MOTOR AGE on the subject of replacing Maxwell front bearing the following should have been included:

Drop bottom part of crankcase and disconnect main bearing oil line. After this is done the work is performed as previously mentioned, that is, the radiator is removed, then the front engine support and the gear case cover, then the timing gears are taken out. After this is out of the way the front bearing can be replaced.

We are indebted to J. S. Colman, of the Murphy Motors Co., Lincoln, Neb., for calling this to our attention.



Burned Point Breaks Down Insulation

I have an Oldsmobile 30, 1924, six-cylinder car and we are having a great amount of trouble with the high tension wire shorting. I mean the high tension wire that runs from the ignition coil to the center of the distributor cap. I took this wire out of all holders and yet it will short through to the dash, or anything else that it gets up against. I have tried three new wires and for awhile they work O. K., and then the shorting commences again. If I take all spark plugs out and clean them and replate them it stops for awhile. This is the same car that we had trouble with burning out coils. What is your suggestion on this problem?—Willard Moody, State School for Boys, St. Charles, Ill.

THE breaking down of this wire is due to too much resistance in the high-tension circuit. You will appreciate that the spark plug gap offers considerable resistance to the flow of current in the high-tension circuit, but there is another place that is sometimes overlooked, that offers quite a bit of resistance. This is the gap between the rotor or distributor arm, in the ignition unit and the distributor cap. This is in effect an auxiliary gap and frequently gets wide as a result of sparking or burning. We would suggest that you install a new distributor arm and cap if the old ones are burned down somewhat. The effect of the spark plug gap, which by the way should not be over .025 in. and the gap in the ignition unit together makes a resistance that is overloading your coil and high tension wiring. The cure for this is not to put on heavier insulation, but to reduce the gap somewhat, particularly in the ignition unit itself.

Better to Buy Battery Charger

Will you please send me a diagram of a home-made battery charging outfit.—Service Motor Co., Crosby, Minnesota.

WE would be more than glad to supply you with the requested diagram, if such a device would be sure to work out to your advantage. The trouble with a home-made charging outfit is usually that the efficiency is rather low and as a consequence the current consumed in driving it makes battery charging too expensive. Another reason is that if the charging outfit is large enough to handle several batteries at a time, the cost to you for the parts necessary to construct it would be as great if not greater than the cost of a complete charging outfit bought outright. If not greater than the cost of a complete let us know and we will show you how you can use a bank of lamps or other resistance for the purpose of cutting this current down so that you can charge batteries. However, if your current supply is of the alternating variety, it will be well worth your while to get a rectifier or motor generator set.

The names of those concerns who make this kind of equipment will be supplied by separate letter.

Use Mineral Oil on Gears

I am writing about the transmission on a 1927 Oldsmobile Six. What I would like to know is, whether or not you would advise putting Flake Graphite in the transmission for the gears?—Hillman Wright, Box 205, Crane, Tex.

FLAKE Graphite is a very good lubricant under certain conditions, but we would not advise using it in your 1927 Oldsmobile. The reason is that graphite will tend to settle out of the lubricant, and may clog returned passages from some of the bearings. The lubricant to use in your transmission is a heavy mineral oil, such as a steam cylinder oil, as this will properly coat cushion and follow the gears and will not channel except at extremely low temperature.

Here is a Hot One

I have a Hudson 1924 Model car which has a tendency to over-heat, as the water boils when the car is climbing a hill or if the car is driven over thirty miles an hour. I examined the water pump and checked the ignition, but both of these are O. K. The car has good pick-up and a good get away, so what do you suppose can be causing this trouble.—Neiheiser & Smith, Akron, Ohio.

THERE are in the neighborhood of fifty possibilities, but the three or four suggestions we are about to make will probably clear up your trouble.

Our first recommendation would be that you thoroughly boil out the cooling system with a strong Sal-soda solution. We would recommend one pound of regular Sal-soda for each gallon of water—this should be thoroughly mixed before being placed in the radiator, but after it is placed in the radiator the engine should be run with the radia-

tor covered, so that the solution boils. After this has been in for about thirty minutes, it should be rapidly drained off, preferably by removing the bottom hose. Then flush the entire system so that any loose dirt or scum will be removed.

It sometimes happens that the radiator on a car several years old has accumulated a lime deposit, which would not be removed by this method, and which would require the use of muriatic acid to loosen. However, the use of this method is a little bit dangerous in an old radiator, as it is likely to eat through the metal in places if not carefully handled.

Another thing to check is to see that the bottom hose does not collapse when the engine is running at high speed. This can easily be done by watching the hose as the engine is accelerated. If it does collapse a new hose should be installed or a coil spring be placed in the old hose to keep it from caving in. We are showing an illustration of the cylinder block of this car. This block is regularly equipped with water baffle plates in two places, as shown at the left.

It sometimes happens that mechanics remove these plates. This results in a reduced circulation of water around the valve side of the block because of the freedom with which the water can go through these larger holes. It will be worth your while to see that these baffle plates are in place and that the other water passages between the block and the cylinder head are free from any obstruction.

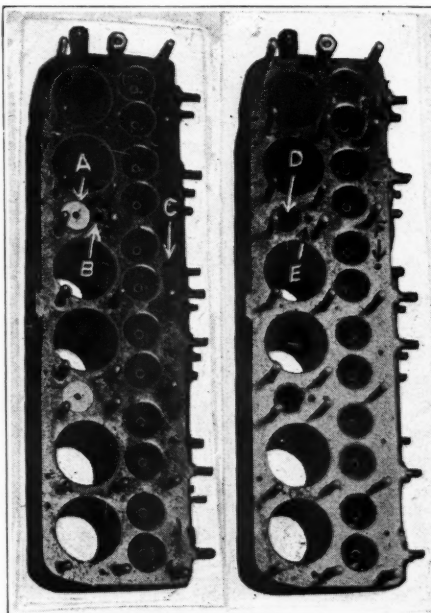
Give Them a Chance to Run In

What is the cause of the knock or ping in the Chevrolet cars of 1925, '26 and '27?

I have tested out several of these engines that have not run 500 miles and have found all bearings tight, and that the piston rings and pins were in good condition. However, there is this noise that I refer to, and I would like to know what can be done to take it out. This can be heard at idling speed and up to 25 m.p.h., and it sounds like a light rod knock.—August J. Versluis, Stanley, Iowa.

WITH regard to this trouble we would say "give them a chance." By this we mean, run the cars another 500 miles. The Chevrolet engines are set up quite tight at the factory and it takes all of 500 to limber them.

A new, tight engine does not have the compression of an engine that is properly run in. As a consequence its action will be less regular than one in which there is uniform compression. In addition there is considerable internal friction between the different parts, and all of this works together to produce uneven and noisy operation. On a few cars you may find that the rocker arm cover has been pulled down too tight, and the rocker arms are striking the cover. In a case of this kind we would suggest installing an extra cover gasket and then with a little care in installing the cover this noise will very soon be disposed of.



Answers to Legal Questions

Getting Damages for Negligent Work

I WAS driving Chevrolet truck, oil pump stopped working, burned out connecting rod bearing. I called service truck, they came out, pulled me in, installed rod, also repaired pump. About two days later, I was not driving at the time, the truck began to lose compression in one cylinder and would not pull its load on hill. When truck came in, I removed head and found that clamp screw that holds piston pin was not clamped securely, letting pin work out, scoring block until it could not be re-honed as would hone too thin. I called party who did the work, they said it could have been caused by way truck was run. I called them three times trying to get them to do something, finally they said they would do nothing.

I had new block installed, carried old block and showed them how it was. The manager said the mechanic said I was in such a hurry he could not give me a good job, and that they would just turn job out anyway to get it out of shop when a man was in a hurry. I asked him if that was the kind of service he put out when a man was in a hurry. He said yes.

Now, are they responsible for this, by not doing work right? Can I make them pay for it? What can be done? They are licensed Chevrolet dealers.—C. B. Norris, Marrowbone Garage, Marrowbone, Ky.

A GARAGEMAN may run his repair shop to suit his fancy, but one may be held liable for negligent work turned out for his customers. He is not held to a high degree of skill in the work he does but he must exercise the skill of the ordinary worker in his field. In this relation the Supreme Court of Iowa has defined ordinary skill to mean that degree which men engaged in that particular art usually employ, not that which belongs to a few men only of extraordinary endowments and capac-

By Wellington Gustin

ities. (Burrichter versus Bell, 194 N. W. 947).

Regarding the obligation of a repairman from the duty imposed by his business, the rule has been stated to be that he engages to use a degree of diligence, attention and skill adequate to the performance of his undertaking.

The best policy along the lines which a garage owner could adopt would be to run his repair department within the bounds above set forth. A repairman cannot make a rule for doing hurried work which does not fully satisfy the above named requirements, unless the rule is brought to the attention of the customer and agreed to, or at least assented to by some action of the customer. If a customer is told he will be given the hurried job and the customer says nothing, or permits the work to proceed he will thereby have assented to the hurried job. Even if it be a hurried job, that will not excuse the repairman (either the garage keeper or his employees) from negligence in the work done nor from using the ordinary skill required in what he does do.

Nor would the excuse of the hurried job be permitted, in my opinion, for not fastening parts securely, which are liable to work loose, causing damages. Thinking it over, I am of opinion it will be hard to distinguish between a "hurried job" and negligence. Hurry is associated with negligence, and if damage results from the hurry, that fact alone will imply the negligence, it seems to me.

Now, of course, if the damage resulted from the way you operated the truck in question, your own negligence would offset negligence of the repairman.

However, this is a question of fact—whether you operated the truck in an improper manner, causing the damage complained about.

From your query, the old block which you carried to show the repairman appears to hold evidence of the negligence resulting in the damage to you. If so, you should retain this in case a settlement is not reached out of court. Real evidence—that is, evidence from a physical fact or object itself—is often conclusive proof. But you should see that there is no reasonably different interpretation of what this real evidence discloses and means.

You would be permitted to introduce in evidence what the repairman said favorable to your claim in the controversy. If you can prove in essence that the repairman did "turn job out anyway to get it out of shop," meaning your job, you should have no difficulty in establishing negligence, for which the repairman is liable.

The fact that a repairman has a rule or custom in his shop of turning out a job in a hurried manner, that is, "anyway to get it out of shop," where customer is in a hurry for his work, does not relieve him of the rule to employ the ordinary skill in making the repairs, or of the necessity to use care to prevent loss to his customer. His private rule, though generally used by him, does not make a custom or rule, applying to losses of a customer by careless work. It is an open question whether one can contract away his liability in cases of damages to others by his own negligence. But if you told the repairman to do the work a certain way which was done, because of your hurry, then he would only be carrying out your orders.

Fafnir Announces Development of Spring Shackles of the Ball-Bearing Type

(Continued from page 41)

In the free end shackle another departure in design is made when the shackle saddles the frame, in which case the central spreader is offset to clear the frame and the links are reinforced at the long ends. When using ball bearing shackles at the front spring ends, a bracket is forged integral with the spring hanger, slotted on both sides in the bottom to permit dropping spring and pin, and with provision for assembling the bearing cups and bearings in this bracket. In assembly, the pin is pressed into the spring eye. Frame and spring eyes are then aligned, and bearings and cups are assembled from the outside, by screwing in the cup, a four-toothed lock washer being used to locate the cup, fastened down with a lock washer and a short bolt or screw, screwing into the bearing cup.

With this design of shackle it is impossible to assemble the units too tight, which might cause squeaks. Rattles are eliminated through the use of anti-friction bearings instead of bushings subject to wear. As stated, experience has shown that the need for lubrication is practically eliminated. A further advantage is claimed to be that shackle friction does not vary, hence a permanent adjustment can be made of secondary damping devices such as snubbers and shock absorbers.

The cost of production has been kept down by simplification of the machining operations. The assembly bolts are of standard form, and the remaining parts, such as links and spreader, are cheap to produce, the links being steel pressings, and spreaders short lengths of steel tubing.

PURRS AND PINGS



Jack Hiscock is Wanted at the Grandstand

CHICAGO—You surely are rattling the skeleton for us oldtimers with that cartoon calendar in *MOTOR AGE*. Memories of many good times were evoked by that August 26, 1905, entry in the July 28 issue:—"Henry Ford and Louis Chevrolet drive in Jack Hiscock's race meet at Cape May, N. J." Jack Hiscock was a young fellow who could get more punch out of the English language than any man I ever met or read. And I'll bet he can push a wicked pencil than ever. Where is he?—L. B. D.

Is There No Limit to the Kid's Cleverness?

INDIANAPOLIS—You certainly are making us all realize the good old age of the young *MOTOR AGE* with those news items from early issues dolled up as spot news. Congratulations on your success in originating a new way to do an old trick.—H. E. R.

Woof! Woof!

LANCASTER, PA.—Notice your new department, "Hot Dogs." Ought to call it "Bull"-dogs. But, seriously, the magazine is good and we like to look through it carefully each week to see what new stunt you are pulling. One thing about this automobile business, you have to keep young and up-to-date and human, or you'll be left behind. The best praise I can give *MOTOR AGE* is that here is an automobile magazine just as snappy as the automobile business itself.—E. J. S.

Some Say It's Terrible

PHILADELPHIA—That stunt of printing a story as straight news and then explaining at the very end that it is taken from a copy of *MOTOR AGE* twenty-seven years ago, is terrible. I read all the way through the story in the August 4 issue, "Automobiles May Not Use Ferries," before I discovered it was a reprint.—A. N.



LETTERS to the editor from those whose "attention has been called"; from those who point with pride and those who view with alarm, from those who are easy to please and those who are hard to please; from those who are happy when they find a good thing and those who are happier when they find something they consider not so good; from those who boost and those who knock; from those who see the doughnut and those who see the hole; in other words, Dear Subscriber, from you and you and you—as well as from the man who borrows your copy of *MOTOR AGE* or reads it over your shoulder.

Please Send Us a Ping—We'd Love to Print It

MADISON, WIS.—I like your "Pings and Purrs" page very much. But I would like it better if there were more pings and fewer purrs. Do you file all the pings in the waste basket?—G. S.

Flattered No End

LANSING, MICH.—CHB566 50 NL 2 EXTRA GET ANSWER *MOTOR AGE*, CHESTNUT AND FIFTY-SIXTH STS., PHILADELPHIA, PA. ATTENTION JOHN CLEARY, EDITOR, WOULD YOU KINDLY GRANT US PERMISSION TO USE YOUR JOHN CLEARY SAYS QUOTATION BOTTOM OF PAGE NINETEEN, AUGUST FOURTH ISSUE *MOTOR AGE* STOP WOULD YOU PLEASE ADVISE BY WIRE COLLECT TO BON PRENTISS MANAGER SALES PROMOTION DIVISION OLDS MOTOR WORKS, LANSING, MICHIGAN—OLDS PRENTISS.

It's the Same Versatile Cliff

PEORIA, ILL.—The best help I ever got to make me a better salesman was from a book called "Automobile Selling Sense" by a man named Cliff Knoble. That guy certainly knows his way about in this business. In the July 28 issue of *MOTOR AGE*, on page 13, I see a picture labeled Cliff Knoble. I wonder if you can tell me if that's the same man.—G. E.

Some Say It's Wonderful

NEW YORK—I didn't realize how long *MOTOR AGE* has been published as a weekly automobile paper until I started to read some of the news items you are reprinting from issues of its early days. You could have told me it has been published for 28 years, and that would not have registered. You could have run a department, "What *MOTOR AGE* said 25 Years Ago" and so on, and I would have passed it by. But when you take a piece of news from one of the early books, present it just as you present today's news, and then explain the date and source of the story at the end, I get a clear perception of the many years you have served this industry. Like the automobile business itself, you are 28 years young.—V. G.

Others Say It's Marvelous

DETROIT—We are getting quite a laugh out of some of the stories you are reprinting from old issues in the guise of present-day news. And we are also getting some education out of them. I don't know any better way to picture the conditions in the automobile business in the early years of this century than by publishing the news of those days alongside today's news. And I don't know any better way you could have chosen to impress your readers with the honorable age of *MOTOR AGE*. I judge from some of these stories that the publishers of your book were seers. In other words, *MOTOR AGE* began publication before the motor age was an actuality.—L. D.

And Greater Ones Are Coming

CHICAGO—Give us more articles like "The Perfect Parts Man," "Flat Tires I Have Met" and "Salesmen Under the Buyer's X-Ray." They were great.—J. E. G.

Along Came Ruth

RUTH, NEV.—May we add our congratulations on the new make-up of *MOTOR AGE*? It is an excellent improvement.—H. R. Nelson.



Prices, Weight and Equipment of Current Passenger Car Models

Important Changes in Specifications and Price Tables since last issue.

FALCON-KNIGHT LOCOMOBILE STUTZ

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
AUBURN				
24p. Roadster.....	\$1095	2	.....	aeghrw
5p. Touring.....	1145	4	.....	aeghrw
24p. Cabriolet.....	1295	.....	.....	.....
5p. Sedan.....	1195	2	3040	aeghir
5p. Sedan.....	1295	4	3080	aeghr
5p. Wand. Sedan.....	1345	4	3040	aeghr
24p. Roadster.....	1395	2	.....	aeghmnrw
5p. Touring.....	1445	4	.....	aeghmnrw
24p. Cabriolet.....	1595	.....	.....	.....
5p. Sp. Sedan.....	1495	4	3350	aeghimnr
5p. Sedan.....	1695	4	3390	aeghmnr
5p. Wand. Sedan.....	1745	4	3390	aeghmnr
24p. Sp. Rdster.....	1995	2	3180	aeghmnrw
5p. Touring.....	2045	4	3200	aeghmnr
24p. Cabriolet.....	2095	.....	.....	.....
5p. Sp. Sedan.....	2095	4	3380	aeghmnr
5p. Sedan.....	2195	4	3450	aeghmnr
5p. Wand. Sedan.....	2245	4	3450	aeghmnr
24p. Sp. Rdster.....	2295	4	.....	.....
5p. Sedan.....	2595	4	4200	aeghmnr
BUICK				
4p. DeL. Rdster.....	\$1195	2	2990	ahmnr
5p. Touring DeL.....	1225	4	3040	ahmnr
24p. Coupe.....	1195	2	3110	ahmnr
5p. 2d. Sedan.....	1195	2	3215	ahmnr
5p. 4d. Sedan.....	1295	4	3300	ahmnr
4p. Ctry. Club.....	1275	4	3190	ahmnr
4p. Town Bro'm.....	1375	4	3305	ah
4p. Coupe.....	1465	2	3800	ahmnr
5p. 4d. Sedan.....	1495	4	3870	hmnr
5p. Town Bro'm.....	1575	.....	.....	.....
24p. Sp. Rdster.....	1495	2	3655	ahgmnrw
4p. Sp. Touring.....	1525	4	3735	ahgmnrw
5p. Coupe.....	1850	2	3940	ahmnr

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
3p. Ctry. Club.....	1765	2	3905	aghmnor
5p. Bro. Sedan.....	1925	4	4050	aghmnoru
7p. Sedan.....	1995	4	4115	aghmnort
CADILLAC				
"Standard"				
132" W.B.				
5p. Brougham.....	\$2995	2	4170	aghjlnprtx
2p. Coupe.....	3100	2	4105	aghlnprtx
5p. Victoria.....	3195	2	4190	aghlnprtx
5p. Sedan.....	3250	4	4270	aghjlnprtx
2p. Sp. Coupe.....	3500	2	4460	Deghiklmp
5p. Sp. Sedan.....	3650	4	4590	Deghiklmp
138" W.B.				
7p. Sedan.....	3400	4	4420	aghlnprtx
7p. Imperial.....	3535	4	4480	aghlnprtx
"Custom"				
132" W.B.				
2p. Roadster.....	3350	2	220	aeghlmp
2p. Conv. Coupe.....	3450	2	300	aeghlmp
138" W.B.				
7p. Touring.....	3450	.....	1285	aeghlmp
4p. Phaeton.....	3450	.....	4275	aeghlmp
4p. Sp. Phaeton.....	3975	.....	4705	Beghiklmp
5p. Coupe.....	3855	2	4465	aeghlmp
5p. Sedan.....	3995	.....	4465	aeghlmp
7p. Suburban.....	4125	4	4580	aeghlmp
7p. Im. Suburb.....	4350	4	4615	aeghlmp

CHANDLER				
"Big Six"				
24p. Roadster.....	\$1695	2	3200	Ahmnrw
7p. Touring.....	1695	4	3360	ahmnr
5p. Met. Sedan.....	1595	4	3570	ahjmaou
4p. Coupe.....	1675	2	3485	ahmno
4p. Ctry. Club.....	1675	2	3435	ahno
5p. DeL. Sedan.....	1695	4	3570	ahmnot
7p. Sedan.....	1895	4	3725	ahmnotu
"Spec. Six"				
5p. Touring.....	1145	4	2890	ah
5p. Sp. Touring.....	1295	4	2940	Diw
3p. Coupe.....	1195	2	3050	ah
3p. DeL. Coupe.....	1285	2	3050	ah
5p. Sedan.....	1295	4	3270	ah
5p. Sedan DeL.....	1345	4	3270	ah
"Std. 6"				
5p. Touring.....	945	4	2475	ah
5p. DeL. Touring.....	1005	4	2565	aiw
24p. Rdster.....	1135	2	2470	ah
5p. Sedan.....	995	4	2740	ah
3p. Coupe.....	1035	2	2630	ah
5p. DeL. Sedan.....	1135	4	2740	ah
3p. DeL. Coupe.....	1125	2	2630	ah
"Roy. St. 8"				
7p. Touring.....	2195	4	3645	ahjmnprw
4p. Roadster.....	2195	2	3435	Ahmnrptw
4p. Coupe.....	2195	2	3610	ahmnrptw
4p. Ctry. Club.....	2195	2	3610	ahmnrptw
5p. Sedan.....	2195	4	3780	ahmnrptw
7p. Sedan.....	2295	4	3870	ahmnrptw

CHEVROLET				
"AA"				
2p. Roadster.....	\$ 525	2	1890	dr
5p. Touring.....	525	4	1965	dr
2p. Util. Cpe.....	625	2	2090	dbr
5p. Coach.....	595	2	2190	dbr
5p. Sedan.....	695	4	2275	dbr
24p. Cabriolet.....	715	2	2135	dbr
5p. Land. Sedan.....	745	4	2270	dbr
Imp. Land.....	780	4	2260	dbr

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
CHRYSLER "52"				
5p. Touring.....	\$ 750	4	.....	ar
24p. Roadster.....	725	2	2210	ar
2p. Coupe.....	725	2	2355	ar
5p. Sedan.....	735	2	2350	ar
5p. Sedan.....	795	4	2455	ar
5p. De L. Sedan.....	875	4	2390	ahr
"62"				
5p. Touring.....	1095	4	2645	aghnr
24p. Roadster.....	1175	2	2625	aeghnw
5p. Sedan.....	1145	2	2770	aghnr
5p. Sedan.....	1245	4	2840	aghnr
24p. Coupe.....	1245	2	2750	aghnr
5p. Land. Sedan.....	1295	.....	2855	.....
"70"				
24p. Roadster.....	1495	2	2845	aeghmnrw
5p. Phaeton.....	1395	4	2930	aghmr
5p. Sp. Phaeton.....	1495	4	2905	aeghmnrw
4p. Coupe.....	1595	2	2905	aghmr
24p. Roy. Coupe.....	1545	2	3000	aghmr
5p. Brougham.....	1525	2	3090	aghmr
5p. Roy. Sedan.....	1595	4	3150	aghmr
24p. Cabriolet.....	1745	2	2935	aghmr
5p. Crown Sedan.....	1795	4	3160	aghmr
"80"				
5p. Phaeton.....	2495	4	3925	aeghlmp
24p. Roadster.....	2595	2	3805	Beghlmp
7p. Phaeton.....	2645	.....	4115	.....
24p. Sp. Roadster.....	2695	.....	3805	.....
5p. Sp. Phaeton.....	2895	.....	4240	.....
5p. Std. Sedan.....	2675	4	4155	aghlmnrptw
5p. Std. Landau.....	2795	4	4215	.....
7p. Std. Sedan.....	2895	4	4370	.....
5p. Sedan.....	3195	2	4260	aeghlmp
5p. Land. Sedan.....	3295	.....	4220	.....
7p. Sedan.....	3295	4	4370	aeghlmp
5p. Coupe.....	3095	2	4220	aeghlmp
24p. Cabriolet.....	3495	2	4065	aeghlmp
5p. Sedan Lim.....	3595	.....	4260	.....
7p. Sedan Lim.....	3595	4	4450	aeghlmp
5p. Town Car.....	5495	.....	4265	aeghlmp

CUNNINGHAM				
"V-7"				
7p. Touring.....	\$6650	4	4600	Ceghiklmp
4p. Sp. Touring.....	6150	4	4500	Ceghiklmp
4p. Coupe.....	7800	2	4700	Ceghiklmp
6p. Limousine.....	8100	4	5000	Ceghiklmp
DAVIS "92-27"				
5p. Leg. Tour.....	\$1395	4	2915	Dhmnr
5p. Sedan.....	1595	4	3000	Dhmnr
5p. Imp. Sedan.....	1795	4	3055	Dghmnort
"94-27"				
5p. Roadster.....	1245	2	2350	dbr
5p. Touring.....	1285	4	2500	dbr
5p. Sedan.....	1285	4	2570	dbr
3p. Coupe.....	1285	2	2375	dbr
5p. Imp. Sedan.....	1385	4	2575	Dghmnort
"98-27"				
5p. Polo Rdster.....	1795	2	3000	aghmr
5p. Touring.....	1795	4	3050	aghmr
4p. Coupe.....	1865	2	3150	aghmr
5p. Emp. Sedan.....	1885	4	3200	aghmnort

DIANA "St. 8"				
5p. Phaeton.....	\$1595	4	3100	agmn
5p. Roy. Roadster.....	1695	2	2995	agmnw
5p. P.B. Rdster.....	1795	2	2995	Bgmnrw
5p. Cab. Rdster.....	1995	2	3160	agmn
5p. Cab. Rdster.....	2295	2	3160	agmn
5p. 4d. Sedan.....	1995	4	3275	aghmnort
5p. 2d. Sedan.....	1695	2	3170	aghmnort
135" W.B.				
7p. Touring.....	1695	4	3336	agmn

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment	
DODGE BROS.					
108" W.B.					
5p. Sedan.....	875	4	2600		
5p. DeL. Sedan.....	975	4	2609		
2p. Coupe.....	855	2	2428		
4. Cab. Rdstr.....	955	2	....	
"Senior 6"					
4p Cab Rdstr.....	1595	3353	Cehmnr	tx	
5p. Sedan.....	1595	4	3412	Cehmnr	tx
4p. Coupe.....	1570	2	3315	Cehmnr	tx
du PONT "E"					
4p. Roadster.....	\$2800	3700	afghkmn		
5p. Touring.....	2800	4	3850	afghkmn	
4p. Coupe.....	3200	3850	afghkmnt		
5p. Sedan.....	3400	4100	afghkmnt		
5p. Con. Sedan.....	3750	4	4180	Bfhgkmnt	
ELCAR "6-70"					
5-7p. Touring.....	\$1275				
4p. Land. Rdstr.....	1475	2	2580	ahjmr	
4p. Brougham.....	1295	2	2670	ahjmr	
5p. Sedan.....	1395	4	2750	ahjmr	
"8-82"					
5-7p. Touring.....	1645				
2-4p. Roadster.....	1870	2	3320	aeghmnr	
5p. Brougham.....	1595	2	3410	aeghmnr	
5p. Sedan.....	1790	4	3490	aeghijnmr	
"8-90"					
7p. Touring.....	2465	4	3675	aeghkmnr	
4p. Land. Rdstr.....	2295	2	3620	aeghmnr	
5p. Brougham.....	2195	2	3710	aeghmnr	
5p. Sedan.....	2265				
5p. Sedan.....	2465	4	3895	aeghilmnr	
7p. Sedan.....	2765	4	4245	aeghkmnr	

ERSKINE "6"				
5p. Tourer.....	\$915	4	2300	ahmnr
Spt. Rdster.....	965	.....	.....	.....
2p. Bus. Coupe.....	895	2	2265	ahmnr
24p. Spt. Coupe.....	965	2	2630	ahmnr
5p. Cus. Sedan.....	965	4	2425	ahmnr
ESSEX				
"Super Six"				
2p. Speedabout.....	\$700	2	2150	amnr
4p. Speedster.....	785	4	2230	amnr
2p. Coupe.....	735	2	2340	amnr
5p. Coach.....	735	2	2450	amnr
5p. Sedan.....	835	4	2530	amnr

FALCON-KNIGHT				
4p. Roadster.....	\$1025	2	2450	ghr
Touring.....	.....	.....	.....	.....
2p. Coupe.....	995	.....	2565	ghr
5p. Landau.....	1145	.....	2735	ghrtu
5p. Brougham.....	995	.....	2665	ghr
5p. Sedan.....	1095	.....	2700	ghr
4p. G.G. Rdster.....	1250	.....	2500	Beghkmnrw

FLINT "60"				
5p. Touring.....	\$1250	4	2750	ahmnr
4p. Spt. Rdster.....	1350	2	2885	Ahmnrw
4p. Cpe. Rdster.....	1395	2	2890	ahmnr
5p. Sedan.....	1395	4	3030	ahmnr
5p. Brougham.....	1395	2	3010	ahjmnort
"80"				
120" W.B.				
5p. Touring.....	1450	4	3245	ahmnr
4p. Spt. Tour.....	1595	4	3395	ahmnrw
4p. Coupe.....	1795	2	3500	ahmnr
5p. Sedan.....	1850	4	3625	ahmnr
130" W.B.				
7p. Touring.....	1595	4	3470	ahmnr
7p. Sedan.....	2050	4	3780	ahmnr
"Z-18"				
5p. DeL. Coach.....	895	4	2580	ahknor

KEY TO SYMBOLS:

- A—Wood wheels with spare.
- a—Wood wheels.
- B—Wire wheels with spare.
- b—Wire wheels.
- C—Optional wheels with spare.
- c—Type of wheels optional.
- D—Disk wheels with spare.
- d—Disk wheels.
- e—Front and rear bumpers.
- f—Front bumper.
- g—

Prices, Weights and Equipment of Current Passenger Car Models

Passengers and Model	F.O.B. Price	Doors	Shipping Weight	Standard Equipment
OVERLAND				
"4" Whippet				
5p. Touring.....	\$625	4	1985 ag	
2-4p. Roadster.....	695	2	1930 agh	
2p. Coupe.....	625	2	2025 ag	
5p. Coach.....	625	2	2075 ag	
5p. Sedan.....	725	4	2185 agh	
5p. Landau.....	755	4	2230 agh	
"6" Whippet				
2-4p. Roadster.....	825	2	2225 agh	
5p. Touring.....	765	4	2270 agh	
2p. Coupe.....	795	2	2305 agh	
5p. Coach.....	795	2	2405 agh	
5p. Sedan.....	875	4	2440 agh	
5p. Landau.....	925	4	2490 agh	
PACKARD				
"526"				
4p. Runabout.....	\$2275	2	3545 Deghlmpnx	
5p. Phaeton.....	2275	4	3590 Deghlmpnx	
5p. Sedan.....	2285	4	3925 Deghlmpnx	
"533"				
5p. Phaeton.....	2385	4	3925 Deghlmpnx	
4p. Runabout.....	2385	2	3545 Deghlmpnx	
7p. Touring.....	2485	4	3790 Deghlmpnx	
4p. Coupe.....	2685	2	3925 Deghlmpnx	
5p. Club Sedan.....	2685	4	4015 Deghlmpnx	
7p. Sedan.....	2685	4	4070 Deghlmpnx	
7p. Sedan Lim.....	2785	4	4130 Deghlmpnx	
"443"				
4p. Runabout.....	3975	2	3545 Deghlmpnx	
5p. Phaeton.....	3975	4	4250 Deghlmpnx	
7p. Touring.....	4050	4	4250 Deghlmpnx	
4p. Coupe.....	4950	2	4550 Deghlmpnx	
5p. Club Sedan.....	4950	4	4550 Deghlmpnx	
7p. Sedan.....	5150	4	4660 Deghlmpnx	
7p. Sedan Lim.....	5250	4	4700 Deghlmpnx	
PAIGE "6-45"				
5p. Touring.....	\$1095	4	2525 aeghn	
2p. Coupe.....	1095	2	2525 aeghn	
4p. Cab. Rdster.....	1195	2	2615 aeghn	
5p. Brougham.....	1095	2	2660 aeghn	
5p. Sedan.....	1195	4	2760 aeghn	
"6-65"				
4p. Roadster.....	1395	2	3055 aeghn	
5p. Brougham.....	1395	2	3215 aeghn	
5p. Land. Bro'm.....	1395	2	3115 aeghn	
5p. Sedan.....	1495	4	3280 aeghn	
"6-75"				
7p. Touring.....	1655	4	3420 aeghn	
4p. Cab. Rdster.....	1895	2	3540 aeghn	
5p. Sedan.....	1695	4	3550 aeghn	
4p. Coupe.....	1895	2	3550 aeghn	
7p. Sedan.....	1995	4	3765 aeghn	
7p. Limousine.....	2145	4	3805 aeghn	
"8-85"				
7p. Touring.....	2195	4	3570 aeghn	
5p. Sedan.....	2255	4	3700 aeghn	
4p. Coupe.....	2495	2	3700 aeghn	
4p. Cabriolet.....	2495	2	3690 aeghn	
7p. Limousine.....	2525	4	3910 aeghn	
7p. Limousine.....	2665	4	3950 aeghn	
PEERLESS				
"6-60"				
2-4p. Roadster.....	\$1295	2	2600 aeghlmpnx	
2-4p. Cpe Rdstr.....	1345	4	2725 aeghlmpnx	
5p. Sedan.....	1345	4	2895 aeghlmpnx	
"6-72"				
126 1/2" W.B.				
5p. Coupe.....	2295	2	3400 aeghlmpnx	
5p. Sedan.....	2395	4	3475 aeghlmpnx	
133 1/2" W.B.				
7p. Phaeton.....	1995	4	3175 aeghlmpnx	
2-4p. Roadster.....	2195	2	3300 aeghlmpnx	
7p. Sedan.....	2595	4	3675 aeghlmpnx	
PONTIAC "6"				
2-4p. Roadster.....	\$745	2	2160 agh	
2p. Coupe.....	745	2	2275 agh	
5p. 2d. Sedan.....	745	2	2375 agh	
4p. Sport Cab.....	795	2	2345 agh	
5p. Land. Sedan.....	845	4	2460 agh	
5p. DeL. Landau.....	925	4	2510 agh	
REO "A"				
2p. Roadster.....	\$1685	2	2525 aeghn	
5p. Brougham.....	1685	2	2525 aeghn	
2p. Sport Coupe.....	1625	2	2525 aeghn	
4p. Victoria.....	1845	2	2525 aeghn	
5p. Sedan.....	1845	4	2525 aeghn	
DeL. Sedan.....	1995	4	2525 aeghn	
"Wolverine"				
5p. Brougham.....	1195	2	2960 aeghn	
ROAMER				
"8-78"				
2p. Roadster.....	\$1495	2	1795	
4p. Coupe.....	1495	2	1795	
5p. Sedan.....	1795	4	1795	
"8-80"				
2p. Coupe.....	\$1985	2	3410 ag	
5p. Brougham.....	1985	2	3440 ag	
5p. Sedan.....	1985	4	3570 ag	
"8-88"				
5p. Tourer.....	2495	4	3650 cg	
5p. Sedan.....	2985	4	3980 cg	
7p. Sedan.....	3285	4	3980 cg	
ROLLS ROYCE				
"St. Ghost"				
Open Models.....	\$		Bfghjkmprtx	
Closed Models.....	\$		Bfghjkmprtx	
"New Phantom"				
Open Models.....	\$		Beghjkmprrtx	
Closed Models.....	\$		Beghjkmprrtx	
STAR "4"				
2p. Con. Rdstr.....	\$550	2	1850 a	
5p. Touring.....	550	4	1920 a	
2p. Coupe.....	650	2	2195 ah	
5p. Coach.....	675	2	2120 ah	
5p. Sedan.....	765	4	2200 ah	
"4"				
5p. Touring.....	725	4	2070 a	
2-4p. Roadster.....	885	2	2140 aeghkmrw	
2-4p. Cabriolet.....	915	2	2260 aeghkmr	
2p. Coupe.....	795	2	2145 aghmr	
5p. Coach.....	845	2	2265 aghmr	
5p. Sedan.....	925	4	2340 aghmr	
5p. Land. Sedan.....	975	4	2335 aghmr	
2-4p. Sp. Coupe.....	975	2	2295 aeghkmr	
STEARNS-KNIGHT				
"F-6-85"				
4p. Roadster.....	\$3250	2	4252 aeghklmnp	
"G-8-85"				
4p. Touring.....	3250	4	4322 aeghklmnp	
4p. Cab. Rdstr.....	3550	2	4322 aeghklmnp	
5p. Cus. Sedan.....	3350	4	4562 aeghklmno	
4p. Coupe.....	3450	2	4527 aeghklmno	
5p. Std. Sedan.....	3450	4	4572 aeghklmno	
5p. Sedan Lim.....	3700	4	4650 aeghklmno	
5p. Cus. Sed. Lim.....	3700	4	4637 aeghklmno	
7p. Sedan.....	3750	4	4702 aeghklmno	
7p. Sedan Lim.....	3950	4	4800 aeghklmno	
"G-8-85"				
4p. Roadster.....	3950	2	4448 aeghklmnp	
4p. Touring.....	3950	4	4633 aeghklmnp	
4p. Cabriolet.....	4550	2	4717 aeghklmnp	
4p. Coupe.....	4550	2	4882 aeghklmnp	
5p. Sedan.....	4650	4	4934 aeghklmno	
7p. Sedan.....	4750	4	5027 aeghklmno	
5p. Sedan Lim.....	4850	4	5009 aeghklmno	
7p. Limousine.....	4950	4	5102 aeghklmno	
STUDEBAKER				
"The Dictator"				
5p. Tourer.....	\$1165	3	3080 degbmr	
5p. Du Phaeton.....	1195	4	3105 degbmr	
7p. Tourer.....	1245	3	3090 degbmr	
4p. Roadster.....	1245	3	3090 degbmr	
STUTZ "AA"				
131" W.B.				
2-4p. Sp'dster.....	\$3350	2	4058 aeghlmpnw	
4p. Speedster.....	3360	4	4175 aeghlmpnw	
2-4p. Coupe.....	3365	2	4182 aeghlmpnw	
4p. Viet. Coupe.....	3375	2	4176 aeghlmpnw	
5p. Brougham.....	3395	4	4334 aeghlmpnw	
5p. Sedan.....	3395	4	4340 aeghlmpnw	
5p. Land. Sedan.....	3545	4	4340 aeghlmpnw	
145" W.B.				
7p. Sedan.....	3885	4	4656 aeghlmpnw	
7p. Sedan Lim.....	3985	4	4731 aeghlmpnw	
"AA DeLuxe"				
131" W.B.				
2p. Speedster.....	3450	2	4058 aeghlmpnw	
4p. Speedster.....	3460	4	4175 aeghlmpnw	
"AA Custom"				
131" W.B.				
4p. Speedster.....	4935	4	4656 aeghlmpnw	
5p. Fr. Wales Sed.....	6345	4	4656 aeghlmpnw	
5p. Wey. Deau. S.....	4665	2	4656 aeghlmpnw	
5p. Wey. Sedan.....	4665	4	4656 aeghlmpnw	
145" W.B.				
7p. Speedster.....	3885	4	4656 aeghlmpnw	
7p. Fr. Wales Sed.....	6345	4	4656 aeghlmpnw	
5p. Wey. Sedan.....	5185	4	4656 aeghlmpnw	
7p. Cab. T'n Car.....	6895	4	4656 aeghlmpnw	
2-4p. Cab. Coupe.....	3895	2	4656 aeghlmpnw	
VELIE				
"Std. 50"				
2-4p. Roadster.....	\$1165	2	2730 aeghkmr	
3p. Coupe.....	1165	2	2730 aeghkmr	
5p. Sedan.....	1165	4	2810 aeghkmr	
5p. Met. Sedan.....	1325	4	2810 aeghkmr	
"Spec. 60"				
5p. Club Ph'tn.....	1450	4	3025 aeghkmr	
4p. Coupe.....	1585	2	3260 aeghkmr	
5p. Spec. Sedan.....	1585	4	3335 aeghkmr	
5p. Royal Sedan.....	1635	4	3350 aeghkmr	
WILLIS-KNIGHT				
"66-A"				
2p. Roadster.....	\$1850	2	2645 aghnr	
5p. Touring.....	1850	4	2645 aghnr	
2-4p. Cab C'pe.....	1995	2	2700 aghnr	
4p. Foursome.....	2095	4	2975 aghnr	
5p. Sedan.....	1995	4	2975 aghnr	
135" W.B.				
7p. Touring.....	2495	4	3805 aghnr	
7p. Sedan.....	2850	4	4075 aghnr	
7p. Limousine.....	2950	4	4075 aghnr	
"70-A"				
2-4p. Roadster.....	1350	2	2965 aghnr	
2p. Coupe.....	1295	2	2900 aghnr	
2p. Coupe.....	1295	2	2815 aghnr	
5p. Coach.....	1295	2	3010 aghnr	
2-4p. Cab Coupe.....	1495	2	2880 aghnr	
5p. Sedan.....	1495	4	3105 aghnr	

KEY TO SYMBOLS:

A—Wood wheels with spare.
a—Wood wheels.
B—Wire wheels with spare.
b—Wire wheels.
C—Optional wheels with spare.
c—Type of wheels optional.

D—Disk wheels with spare.
d—Disk wheels.
e—Front and rear bumpers.
f—Front bumper.
g—Shock absorbers or snubbers.
h—Automatic windshield wiper.

KEY TO SYMBOLS:
i—Trunk and trunk rack
j—Trunk rack, no trunk.
k—Spare tire.
l—Spare tire lock.
m—Engine heat indicator.
n—Dash gasoline gage.

- o—Car heater.
- p—Cigar lighter.
- r—Rear traffic signal.
- s—Spotlight.
- t—Vanity and smoking set
- u—Smoking set.

v—Vanity set.
w—Windshield wings.
x—Clock.
*—Overall length.
§—Prices on application.

This list comprises current cars distributed on a national basis only. Data for previous models back to 1920 will be found in the Chilton Catalog and Directory

MAKE AND MODEL			ENGINE										ELECTRICAL SYSTEM		CLUTCH—Type and Make		GEAR SET—Make		UNIVERSAL—Type and Make		REAR AXLE		BRAKES		STEERING GEAR—Make		CHASSIS LUBRICATION—Type and Make			
Wheel Base (Inches)	Tire Size	Model and Make	Number of Cyls.	Bore and Stroke	Rated H.P.	Piston Displacement	Valve Arrangement	Camshaft Drive	Piston Material	No. Main Bear.	Dampers/Vib.	Oiling System	Cooling System	Thermosstat	Shafting	Carburetor	Air Cleaner	Ignition System	Generator and Make	Clutch—Type and Make	Gear Set—Make	Universal—Type and Make	Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location	4-Wheel Type	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
120	28x5.25	Con. 281	6-37x4 1/2	19.8	185	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	4	Y	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.9	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
125	28x5.25	Lyc. 411	6-37x4 1/2	24.9	228	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	5	Y	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.7	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
130-147	31x6.00	Lyc. 411M	6-37x4 1/2	23.4	239	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	5	Y	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.45	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
115	31x6.00	Con. 281	6-37x4 1/2	23.4	207	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	4	Y	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.7	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
120-128	33x6.00	Con. 281	6-37x4 1/2	23.4	274	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	4	Y	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.7	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
314	33x6.75	Con. 314	8-31x5 1/2	21.2	314	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
122-138	33x6.75	Con. 314	8-31x5 1/2	21.2	314	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
122-138	33x6.75	Con. 314	8-31x5 1/2	21.2	314	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
108 1/2	31x5.00	Con. 281	6-37x4 1/2	21.2	289	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
108 1/2	31x5.00	Con. 281	6-37x4 1/2	21.2	289	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
115	31x5.00	Con. 281	6-37x4 1/2	21.2	289	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
124	32x6.00	Con. 281	6-37x4 1/2	21.2	314	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
124	32x6.00	Con. 281	6-37x4 1/2	21.2	314	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.	m-U.P.	Col.	4.91	E-T	M	Ross	S-56 1/2	Pr-Al.	Pr-Al.
103	28x4.40	Con. 281	6-37x4 1/2	21.2	171	1	Ch. Cl.	Ch. Cl.	Ch. Cl.	3	N	PK	Pu.	N	N	Sch.	N	D-R	D-R	P. Long.	War.</									

Here's the Great New Line of Day-Fan

Battery and Socket Powered Receivers



Here's the newest of the battery operated line of Day-Fans—a Six-tube receiver of most remarkable tone—for \$65.00. This needs to be heard to be appreciated. Other battery operated sets in various cabinets.

The Day-Fan
Junior 6 Tube
is priced at ~

\$65⁰⁰

~ and the New Day-Fan 6 M-G

(a Set that
Requires neither
Batteries nor
Eliminators)



This is the De Luxe Cabinet with the big speaker horn that is the favorite setting for the new Motor Generator Receiver—no batteries—no eliminators. Always at full power—needs no attention—never runs down. Available also in smaller cabinets.

RADIO RECEIVERS as used by the Broadcasting Stations to Listen to their Own Programs!

*[Send the Coupon for
Full Information]*

The DAY-CEE Six (AC Tube Set)



When it comes to battery elimination, this year's Day-Fan line has the world beaten. This AC Tube set needs no batteries—plug it into the light socket and the radio of the nation is at your finger tips. Supplied also in more elaborate cabinets. (Day Royal and Day Mar).

DAY-FAN ELECTRIC CO., Dayton, Ohio

Send me information regarding your new radio line and franchise information for

M. A. 2

☐ Dealer

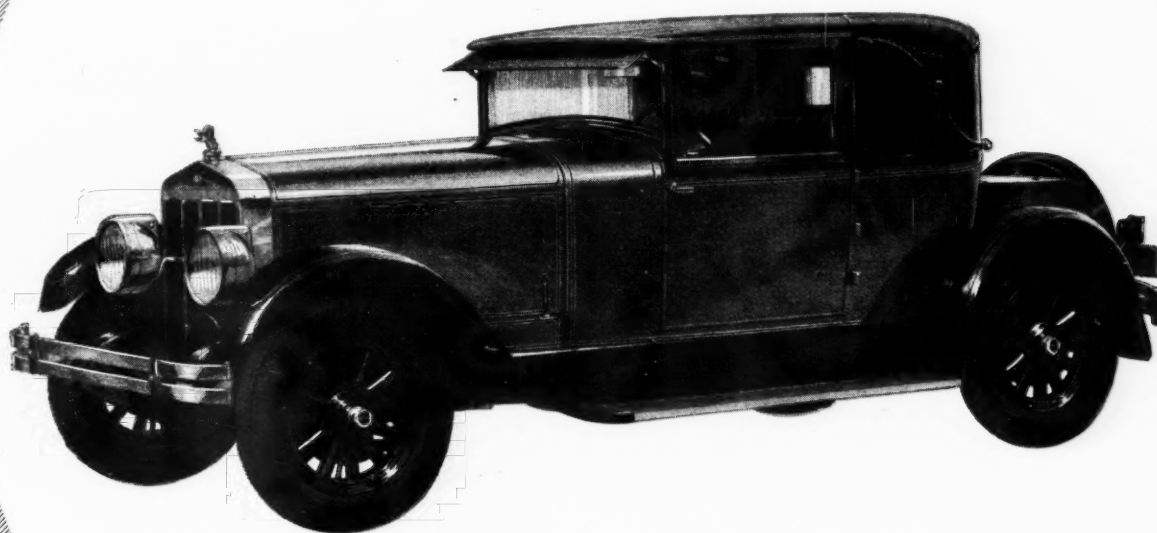
☐ Distributor

NAME _____

ADDRESS _____

City _____

State _____



Franklin dealers and Franklin owners stay with Franklin

Franklin is noted for two things—to a greater degree than almost any other motor car. Franklin has a greater percentage of repeat sales—and Franklin dealers continue longer under the Franklin franchise.

The reason for the first is that Franklin buyers find they have purchased a *real* automobile—they are satisfied there is no better—they are anxious that their next car be *another Franklin*.

The reason for the second is of course, mostly because of the first fact. Dealers find that after selling Franklins a few years they have

an established clientele of loyal Franklin owners.

Dealers make money with Franklin and therefore are satisfied to continue with Franklin.

If you are in a small town, you should have a \$2500-\$3000 car in your line, and you can *very profitably* make that car the Franklin. Your lower-priced car buyers do not continue to buy low-priced cars. They graduate financially into the fine car field. Are you losing the fine car sales? Franklin offers an unusual profit-opportunity to small-town dealers. May we send you the complete details?

Air-Cooled FRANKLIN AUTOMOBILE COMPANY, SYRACUSE, NEW YORK

 FRANKLIN 

Thompson



Thompson

Do
cur

Th
jobb
bigge
the c
garag

No
pock

Do

As
the t
ings

Th
Thor
ment
tion
bolt
easy

As

Valves



Don't regrind old, worn valves; make the cure permanent with new Thompson Valves

The value of this policy has been demonstrated by Thompson jobbers and their customers in the trade in the best possible way—bigger valve sales at better profits. The quality of the line pleases the car owner, and the Thompson Triple Selling Plan enables the garageman to sell all comers.

Now comes another money-making slogan to put profit into your pocketbook—

Don't tighten old, worn bolts; take out squeaks and rattles with new Thompson Bolts

As valves wear faster than most engine parts, they sell faster, and the trade has found this out. *The same thing is true of bolts and bushings in the chassis.*

Thompson Valve sales have proven the case in the engine. Thompson Bolt sales are doing the same thing in chassis replacements, because they represent the same original equipment reputation and the same superiority in quality. On front axle and spring bolt replacements there is a very tidy profit for the repairman, and an easy selling job. Selling merchandise beats selling labor, every time.

Ask the Thompson Jobber for details.

THOMPSON PRODUCTS, INCORPORATED
General Offices: Cleveland, Ohio, U. S. A. Factories: CLEVELAND and DETROIT

Bolts

SPECIAL STEEL OF HIGHER ANALYSIS THAN S. A. E. STANDARD—ONE-PIECE CONSTRUCTION—EXTRA DEEP CASE—PERFECTLY GROUND TO ACCURACY

P A I G E

Step by step we are striving to build a greater Paige organization, with ever broadening opportunities for the dealers who sell Paige sixes and eights.

*Joseph B. Graham
Robert C. Graham
Ray A. Graham*



Did you ever ride a camel?

From
[Saturday Evening Post
Advertisement]

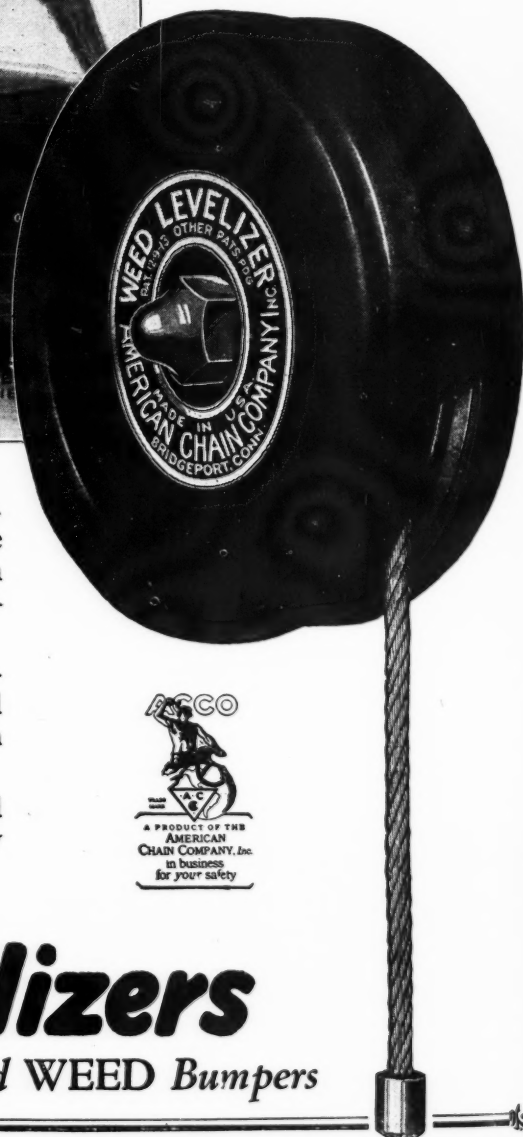
It's a rough ride—unless you're to the camel born. With training in childhood you grow accustomed to the camel's jerks and jounces, for there's a peculiar rhythm to his gait.

But no amount of training can prepare you for the dangerous and uncomfortable jouncing of a car that lacks scientific spring restraint. For you hit some bumps square and fly straight up like a jumping jack. You hit others with only one wheel and you are snapped with a twisting jolt.

WEED Levelizers meet all road conditions. When bad bumps are hit, Levelizers take hold instantly and prevent rebound with a powerful restraint—strong enough to overcome serious rebound.

Ordinary roads need very little spring control. On smooth pavements, springs should be practically unhampered to flex freely with slight hills and hollows.

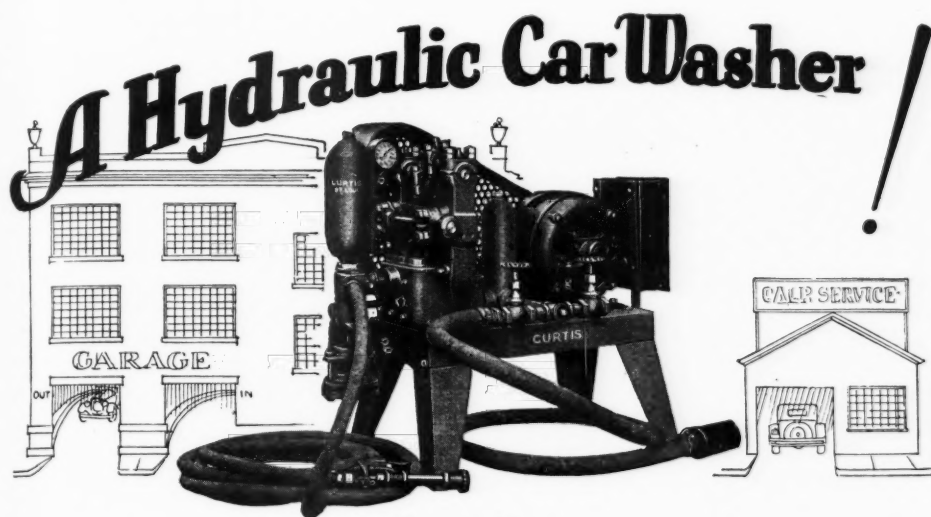
Dealers interested in a shock absorber of proved merit, easy installation and easy salability should investigate WEED Levelizers.



WEED Levelizers

Made by the makers of WEED Chains and WEED Bumpers

CURTIS COMPRESSORS, HOISTS, CRANES, CAR WASH SYSTEMS, PORTABLE COMPRESSOR UNITS



for the Big or Little Business

If you are doing a big car cleaning business you are no doubt using a Curtis Air-Mist Outfit, not only on account of its great capacity but also because of the large variety of additional services it renders. If you are confronted with the problem of economically increasing your washing capacity, the Curtis Hydraulic Car Washer will take care of your overflow washing business, with a very small additional investment.

It is a compact, self-contained unit, which you can quickly install right where you need it most. No special foundation is necessary.

If your business is small and will not justify the installation of the Curtis Air-Mist System, with its many air attachments for complete servicing,

the Curtis Hydraulic Car Washer is just the unit you need. Its cost is very moderate and, with it, you can compete for car washing jobs, making each one carry a real profit.

Behind the development of this new car washer is the ten years' car washing experience of Curtis engineers in solving automobile cleaning problems. Behind its construction is the manufacturing experience of the 73-year-old Curtis organization.

A short study of the facts in the right hand column will convince you that the Curtis Hydraulic Car Washer is a profitable investment whether your business is large or small.

Economical
in First Cost

Economical
in Operation

The Curtis Hydraulic Car Washer involves a very moderate investment. Furthermore, it makes a very economic use of water. The two standard models—the One Nozzle (1 H. P.) and the Two Nozzle (2 H. P.)—use less than five gallons of water per nozzle per minute. The oversize model—Two Nozzle (3 H. P.)—uses only six gallons per minute from each outlet.

This unit will take water direct from the mains at any pressure or may be used with a prepared cleaning solution, hot or cold water, drawn from a tank.

Automatic pressure control protects the pump and hose from excessive strain. Lubrication by the Alemite System.

Rugged three-cylinder pump externally packed—no internal packing troubles. The drive is a flexible tight-clinging roller chain running on cut steel sprockets. The drive and entire gearing is completely guarded. The driving motor does not start against load.

The operating nozzle is light but is of strong brass construction with an unusually easy hand grip. The nozzle shuts off automatically when released or may be locked by a simple mechanism in either chassis or body wash position.

For each nozzle there is supplied 25 feet of special hose. All models are equipped with 8 feet of heavy intake hose with strainer.

Your name and address on the coupon will direct us to forward complete details and prices.

MAIL COUPON TODAY

CURTIS Pneumatic Machinery Company
1957 Kienlen Ave., St. Louis, Mo.
518-U Hudson Terminal, New York City
Please send me full information about Curtis Hydraulic Car Washer.

Name

Address

City

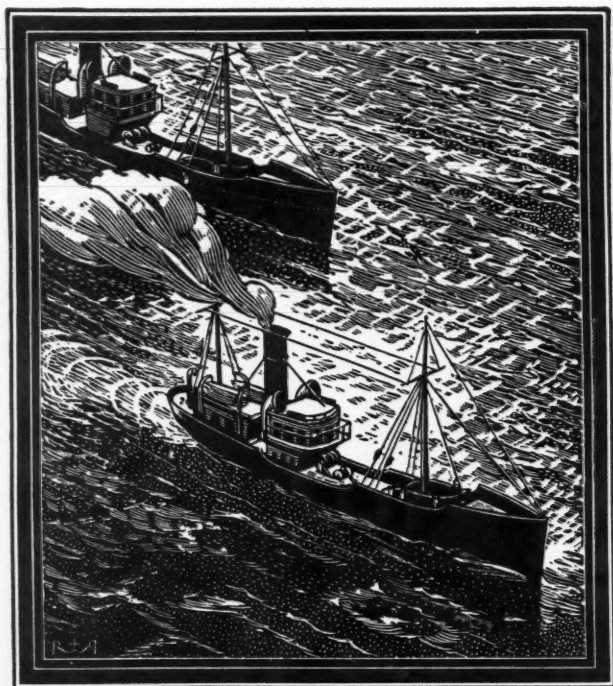
State



CURTIS HYDRAULIC Car Washer

CURTIS PNEUMATIC MACHINERY COMPANY, ST. LOUIS, U.S.A.

Get *Long Distance . . .* the boats are coming in



BUSINESS IS INCREASING its use of Long Distance. Many concerns do millions of dollars' worth of buying via the telephone lines. Important individual sales. Weekly calls to preferred lists of dealers or customers. Special long distance selling campaigns. And for stubborn collections.

Wherever the telephone is used, it saves the costly time of waiting. Decreases the expense of traveling. Smooths out tangles and delays. Cuts the red tape of

THE EXECUTIVES of a large New York fish company do not wait for their steam trawlers to come in from the fishing banks. While the boats are hundreds of miles at sea they are notified by wireless of the size and nature of the catch. With this information at hand, long distance telephone calls are made to big dealers throughout the eastern section of the United States. The cargo is sold before the boats reach the docks.

bickering. Increases business. Long distance calls get things done with less fuss and fewer dollars. They put order and good results into a business. One of the best things about Long Distance is, it will nearly always cost less than you think. What distant call would be helpful and profitable now? . . . *Number, please?*

BELL LONG DISTANCE SERVICE



TOMORROW YOU'LL WISH YOU HAD THE AUBURN FRANCHISE



It remained for Auburn to build a Straight
Eight Sedan for \$1695

125-inch Wheelbase — 75 Miles Per Hour

Finest Mohair Upholstery

Genuine Curled Hair and Marshall Springs

Equipped with Snubbers

Metal Side-Quarters — Brewster Windshield

Four-Wheel Brakes

Special Balloon Tire Steering

AUBURN AUTOMOBILE COMPANY, AUBURN, INDIANA

8-66 ROADSTER
120-inch wheelbase
\$1095
8-77 SPORT SEDAN
125-inch wheelbase
\$1495

8-66 SPORT SEDAN
120-inch wheelbase
\$1195
8-77 CABRIOLET
125-inch wheelbase
\$1295
8-88 CABRIOLET
130-inch wheelbase
\$2095

8-66 CABRIOLET
120-inch wheelbase
\$1295
8-77 SEDAN
125-inch wheelbase
\$1695
8-88 SEDAN
130-inch wheelbase
\$2195

Freight, tax and equipment extra

8-66 SEDAN
120-inch wheelbase
\$1295
8-88 ROADSTER
130-inch wheelbase
\$1995
8-88 7-PASS. SEDAN
147-inch wheelbase
\$2595

8-77 ROADSTER
125-inch wheelbase
\$1395
8-88 SPORT SEDAN
130-inch wheelbase
\$2095

AUBURN

The Car Itself is the Answer

TOMORROW YOU'LL WISH YOU HAD THE AUBURN FRANCHISE

More cars per dealer!

As Auburn's production has rapidly increased, the number of Auburn dealers has increased also.

But, more significant to you, is the fact that at the same time the number of cars per dealer have shown a pronounced increase.

PRODUCTION

1925 production was 104% increase over 1924.

1926 production was 80% increase over 1925.

1927 production will be 124% increase over 1926.

The first five months' production of 1927 is equal to the entire 1926 output.

DEALERS

1927 will show an increase of about 30% in the number of dealers over 1926.

NUMBER OF CARS PER DEALER

In 1926, the increase in average number of cars per Auburn dealer was 26% over 1925.

In 1927, the increase in average number of cars per Auburn dealer will be over 65% more than in 1926.

The Auburn franchise daily becomes more desirable and profitable. The value of the car itself is creating unprecedented public acceptance. Auburn's future promises even more spectacular growth than its record breaking performance this year. Auburn's policy is predicated on the determination that Auburn dealers **MUST** make money and keep it. Now is the time for you to tie to Auburn's success. Write us.

E. L. Bond

AUBURN

The Car Itself is the Answer

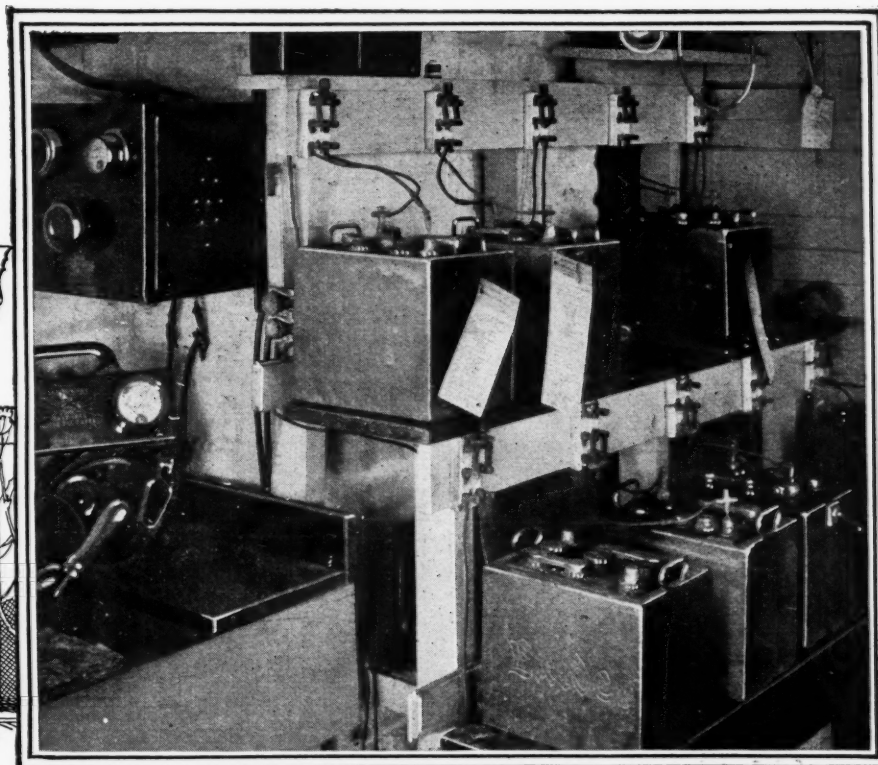
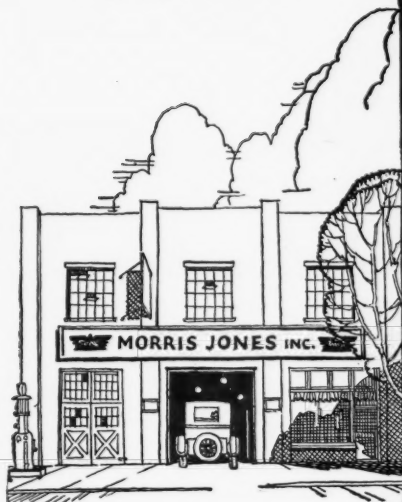
Now G-E Tungar Prices are Reduced

List Prices

10 battery Tungar, \$115

20 battery Tungar, \$200

4 battery Tungar, \$80
(60 cycles—115 volts)



This unused corner brought \$5,000 in five years

The Morris Jones Company, Overbrook, Pennsylvania writes:



"We purchased a ten-battery Tungar about five years ago — and we have used it 365 days a year ever since. This charging unit has made us a profit of over \$5,000 in five years."

This is only one letter of hundreds we have received from satisfied Tungar users.

The G-E Tungar can be quickly installed in small space. It is a steady profit-maker that you can depend on for years of trouble-free service. And now prices are lower than ever!

Furnished in four, ten and twenty battery sizes.

Write for the booklet that shows the profit possibilities of the Tungar.

Merchandise Department
General Electric Company
Bridgeport, Connecticut

 **HEAVY DUTY**
Tungar
REG. U.S. PAT. OFF.
BATTERY CHARGER

Tungar—a registered trademark—is found only on the genuine. Look for it on the name plate.

GENERAL ELECTRIC

A Nation-wide to Chry

Opens Opportunity to — 2

**27th
to
4th
Place
in 3 years**

1924—Chrysler, in its first appearance at a national automobile show—exhibits in 27th place.

1925—During its first year Chrysler ships 32,000 cars, advancing to 18th place in the rankings of the National Automobile Chamber of Commerce by reason of its sales volume of \$50,000,000.

1926—Chrysler builds 137,526 cars during the preceding year, advancing to 9th position.

1927—With a sales volume of \$249,194,000 for 170,414 cars during the twelve months of 1926, Chrysler sweeps forward to 4th place in dollar volume of sales in the industry, being surpassed only by the largest individual manufacturer in the world and two units of a huge corporate organization.



Here is stupendous news to every motor car dealer in this country.

The sweeping public acceptance of Chrysler cars compels us to add 2,000 more dealers if we are to take care of this increasing demand in all parts of the country.

Probably there is need for a dealer in your community. Maybe you have, at times, cast longing eyes on this franchise, but have never felt that it was available.

Why not investigate, NOW!

The Chrysler franchise is admittedly one of the most desirable and sought-after in the industry. The new 1927-28 Franchise

Wire - Write - or

RUSH

Chrysler

0000

More Dealers



Agreement makes it more desirable than ever from the dealer's standpoint.

It is the only one which offers a complete line of cars, covering the four great markets with their prices from \$725 upward. This gives practically an unrestricted field and an unlimited opportunity to make money.

The success of thousands of dealers is undeniable proof of the money-making certainties—not possibilities—of this franchise. And the new Franchise Agreement represents an opportunity which, we candidly believe, is without equal in the industry.

Chrysler's past has been a brilliant record of achievement—27th to 4th place in sales volume in the industry—one of the most remarkable chapters in the history of American Business.

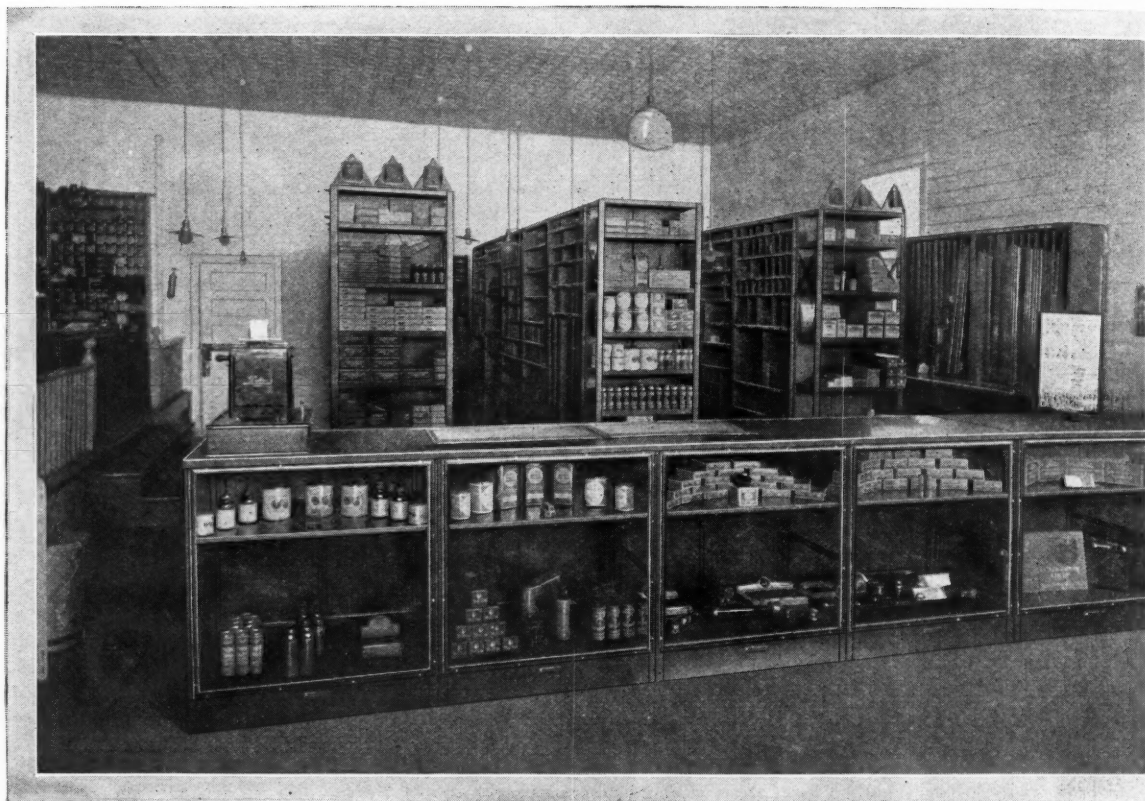
And the present growth of the organization continues at the same pace—making this expansion necessary.

Why not share in the profits of Chrysler's popularity and success? Probably you are just the man we need to take care of the demand for Chrysler cars in your town.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONT.

Phone NOW

Get in touch with us at once. You can rest assured that your request for additional information will be treated with strictest confidence, regardless of whether you wish to carry the matter further or not.



LYON *Auto Parts Control Enables* WILLMAR MOTOR COMPANY *to Give* *First Aid to Motorists*

A hundred miles west of Minneapolis on the Glacier Trail is Willmar, Minnesota. Here the Willmar Motor Company have established a reputation for the quickness and reliability of their service to motorists.

To those who take the long trek westward or spend the week-end in this lake country, service must be immediate—and is. Lyon Equipment helps make it so.

The attractive Lyon glass-fronted steel counters give storage and sales display to items that need to be kept clean and free from dust. The durable linoleum tops make an excellent service counter. Lyon End Display Racks give added storage facilities and sales-making suggestions on space that is convenient but would otherwise be wasted.

Back of these are the shelving units of Lyon Auto Parts Control, where parts are stored

in economical but sufficient quantities and always are instantly accessible. To the right are Lyon Glass Racks and at the extreme left you can see additional Lyon Auto

Parts Control Units. The Willmar Motor Company believes not only in giving quick service but also in making it easy and profitable to do so. Their selection of Lyon Equipment is natural.

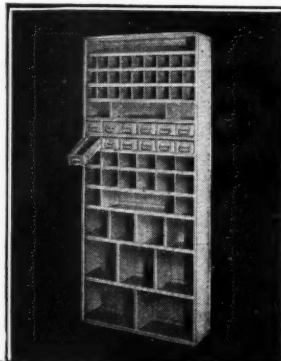
For all motor car dealers there are Lyon Auto Parts Control Systems specially designed to fit their various requirements. Ask your jobber or write us direct for complete information on the Lyon Storage Systems designed to simplify your storage problem and speed up sales.

LYON METALLIC MANUFACTURING CO.
AURORA, ILLINOIS

Plant No. 2
Jersey City, N. J.

Plant No. 3
Los Angeles, Calif.

Lyon Universal Units put spare corners to profitable use. There are fifteen different arrangements. Openings per unit run from 7 to 108. Will take care of big and little parts. Ask your jobber about Lyon Universal Units.

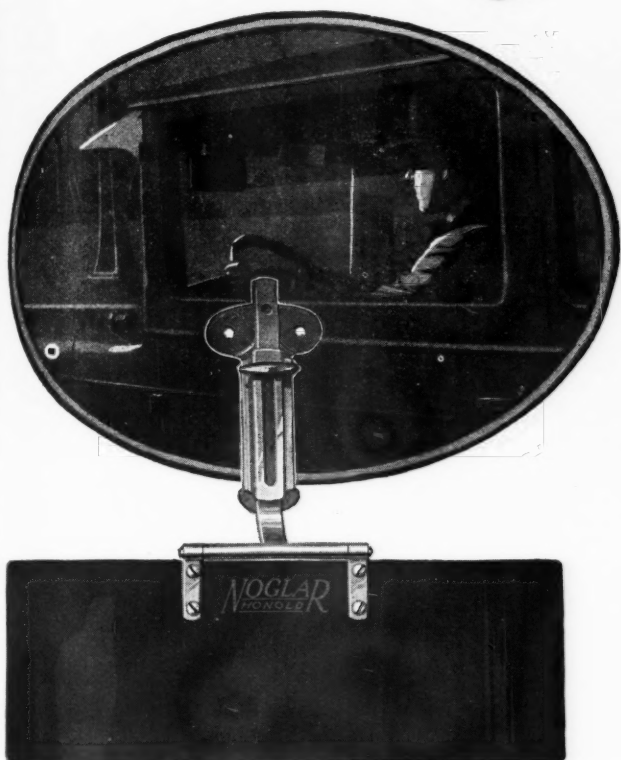


LYON *Auto Parts Control*

Storage Systems, Counters, Steel Benches, Bench Drawers, Tool Boxes, Display Racks, Cabinets, Lockers and Miscellaneous Steel Equipment

99%

Consumer Acceptance



Here is a real proof of the Honold NOGLAR "sales pudding." One hundred Honold NOGLARS were installed on a list of cars picked at random. The owners were told if they did not find the Honold NOGLAR a positive necessity to banish glaring headlights and dazzling sun, the device would be removed and no questions asked.

RESULT—only *one* out of the hundred asked to have the NOGLAR removed. That is real proof of consumer acceptance. Since placing NOGLAR on the market the sales volume has made it possible to cut production costs. Accordingly a new, lower retail price of \$1.50 is announced.

Honold NOGLAR is the most efficient equipment produced. Attractive, durable and an absolute necessity. The shade is heavy, green pyralin mounted on an adjustable, heavily nickle plated bracket. Installed in a minute and operated by a touch of the finger. It is an article that will sell in volume.

Simply place the attention-arresting display stand on your counter and sales will be easily and quickly made.

Write for literature and prices.

HONOLD MANUFACTURING CO.
SHEBOYGAN, WISCONSIN

FREE Display Stand



This attractive display stand sent **FREE** with an order for 12 NOGLARS. Holds NOGLAR firmly and invites your customers to operate the shield. A real sales promotion device.

NOGLAR

HONOLD

Manley One-Gun

Pays for itself & Earns

YORK ROAD GARAGE
BUICK MOTOR CARS
YORK ROAD NEAR PENNSYLVANIA AVE.
TOWSON, MD.
June 23rd, 1927.

Manley Mfg. Co.,
York, Pa.

Gentlemen:

In response to your question as to our experience with our Manley One-Gun Auto Washer, here is the answer;

<u>Cost per week for washing cars;</u>		<u>Income per week for washing cars;</u>
Washer's salary	\$20.00	Since the first of the year we have averaged 40 car washes per week, averaging \$2.00 per car.
Washer's bonus	2.50	
Electricity	2.00	
Sponges and chamois	2.00	
Soap .....	.66	
Water	1.50	
Overhead	10.00	
	<u>38.66</u>	

We are writing off the cost of the Auto Washer in 52 weeks, so to the above operating cost we add per week.. 5.66

TOTAL WEEKLY COST	TOTAL WEEKLY INCOME
NET PROFIT PER WEEK	\$60.00
	<u>44.32</u>
	35.68

We only have one man on the car washing work. We found when there was a rush of work he could get out as many as eight and nine cars per day, but that unless pressed his average was about five per day. We have, therefore, made a deal to pay him a bonus of 25 cents per car for every car over five per day that he washes, which has had the desired effect of giving us an average of forty per week.

The summer business is just starting and indications are that we will have to put on another man. We will then be able to operate night and day, which will more than double our net profits.

Very truly yours,
YORK ROAD GARAGE
M. L. York

P/G

*Here
are the
actual
figures of
a small
country
garage*

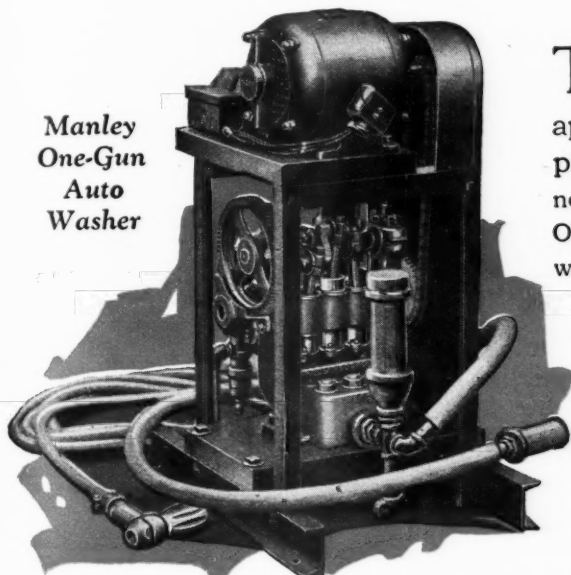
There is no car washer which performs its work without the necessity for hand work with sponge and chamois, but a good car washer saves sponges, soap and brushes, makes the work of the washmen easier, and above all does the job better and quicker than the best hand job.

MANLEY AUTO WASHERS are handled by the leading Automotive Jobbers, who will be glad to bring a machine to your place of business and demonstrate it.

Auto Washer

in one year and \$35 per week net

Manley
One-Gun
Auto
Washer

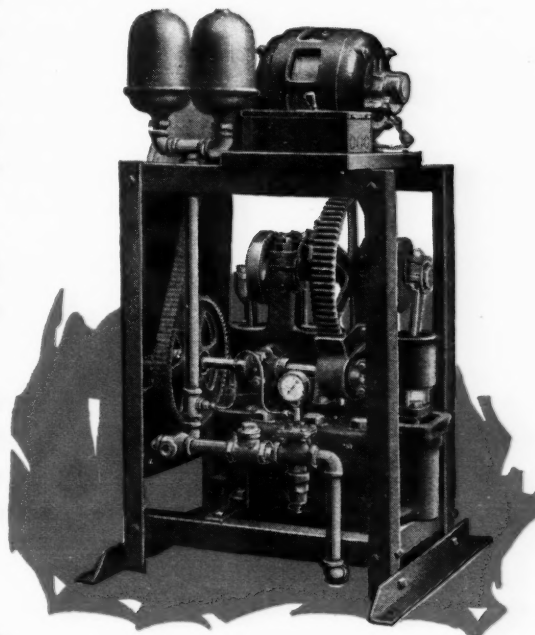


THE MANLEY ONE-GUN AUTO WASHER has been designed to take care of the requirements of approximately 85% of the trade. Unless you employ three or more men on your wash rack there is no necessity for investing in anything larger than a One-Gun Auto Washer. For the other 15% of the trade who operate big auto laundries, a number of wash racks, and use three or more men per wash rack, we have provided Two, Three and Six-Gun Auto Washers.

The MANLEY AUTO-WASHER is a wonderful piece of machinery, designed for continuous and trouble-free operation.

Our space here is too limited to give all of the mechanical details which make the machine so dependable but we will be glad to send you complete information, if you will merely fill in the attached coupon.

Fill in this Coupon Today and establish yourself as the up-to-date car washing establishment in your vicinity.



Manley Six-Gun Auto Washer

MANLEY MFG. CO., YORK, PA., U. S. A.

Please send me complete literature describing MANLEY AUTO WASHERS.

Name

Address

The Jobber from whom I buy my garage equipment is

Name City





**Old Armature Cores
are money—
Don't throw money away!**

Every time you throw away the core of a burned-out armature you are robbing yourself of anywhere from one dollar to six dollars extra profit.

The **CORE** is all right. Send it to us. We will rewind it and give you an armature equal to new—in every respect.

Rewinding of armatures is a business with us. Every Fredericks Rewind goes through more than fifty operations. Only skilled armature workers are employed. Special machines designed and patented by us speed the work. Every

operation is followed by inspection and careful test.

Except for the indestructible core, the armature is **NEW**. But it costs from one to six dollars less than you would pay under ordinary circumstances.

Buy Fredericks Rewinds—and put the difference in the bank. The coupon, or a line on your letterhead, will bring price list and complete information.

Address, H. M. FREDERICKS
COMPANY, LOCK HAVEN, PA.

FREDERICKS

Rewinds

H. M. Fredericks Company, Lock Haven, Pa.

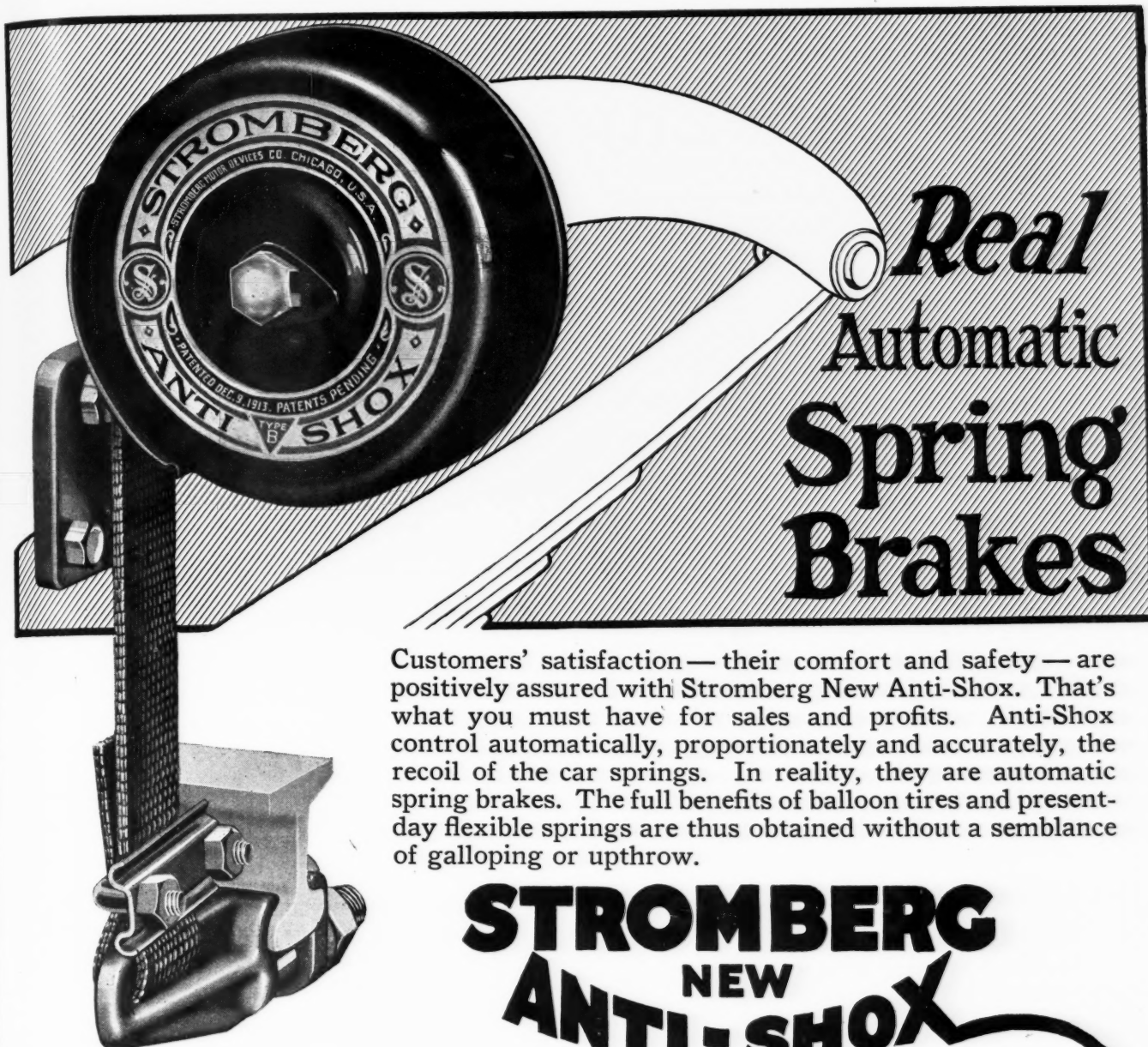
Gentlemen:

Without obligation, send me the free booklet of information and prices on Fredericks Rewinds.

Name

Company

Address



Real Automatic Spring Brakes

Customers' satisfaction — their comfort and safety — are positively assured with Stromberg New Anti-Shox. That's what you must have for sales and profits. Anti-Shox control automatically, proportionately and accurately, the recoil of the car springs. In reality, they are automatic spring brakes. The full benefits of balloon tires and present-day flexible springs are thus obtained without a semblance of galloping or upthrow.

STROMBERG NEW ANTI-SHOX

Here are Seven Big Features for Comfort and Profit

Permit car springs to perform their full function.

Correct resistance regulated automatically for every road condition.

Do not grunt or squeak.

Not affected by changes in temperature.

Brake surface increases and decreases proportionate to spring action.

Return action of Anti-Shox Spring coordinates perfectly with car spring.

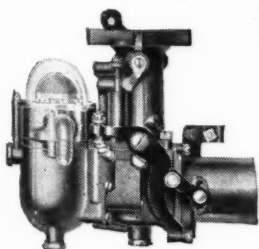
Sturdy construction. Best materials and workmanship and the Stromberg reputation behind them.

Let us send you all the facts about Stromberg Anti-Shox, our attractive discounts and dealer co-operative plan, as well as detailed information about

Other Stromberg Automobile Necessities

The New Stromberg VIS-A-GAS CARBURETOR

Combines all of the qualities for dependability, durability and precision of action of the Stromberg aeroplane model which did so much in making possible recent major aeroplane achievements, with many added features for convenience and power. An easy seller—a fast money-maker.



Ask about the Stromberg Tandem Electric Windshield Wiper

STROMBERG MOTOR DEVICES CO.,
58-68 East 25th Street, Chicago

Direct Factory Branches: 517 W. 57th St., New York City. 760 Commonwealth Ave., Boston. 84-86 Hancock Ave. W., Detroit. 1529 Laurel Ave., Minneapolis. 1809 McGee St., Kansas City. London, Eng., Chelsea. S. W. 10, Milman's St. and Cheyne Walk.

STROMBERG
MOTOR
DEVICES CO.,

Desk B-8-18, 68 E. 25th
Street, Chicago

Please send me without
obligation, complete facts
about Stromberg money-mak-
ing auto necessities, dealer dis-
counts, etc.

Name

Address

Kind of Dealer.....

Did You Enjoy This Copy?

YOU can get one like it every week for only \$3.00 a year—an average cost of a little less than six cents each.

Each and every man in the trade needs MOTOR AGE—needs the

positive help it offers in the solution of daily problems and the valuable ideas it gathers for its readers.

Your competitor reads MOTOR AGE, and you need to read it also if you want to keep up with the leaders of the automotive field.

Here's How MOTOR AGE Will Help You

SERVICING —MOTOR AGE will show you how to make flat rates—How to sell Service—How to make customers permanent—How to organize a workshop—How to handle knotty problems—How to select Machinery—How to test electrical systems—How to make quick repairs—How to route shop work.

HIRING —How to get the right men—How to train them—How to pay them—How to get their co-operation—How to keep them enthusiastic.

BUYING —How to select an accessory stock—How to judge merchandise—How to get a fast turnover—How to avoid dead items.

SELLING —How other men do it—How to keep down overhead—How to advertise—How to make Salesmen produce—How to create a market—How to find prospects—How to make every sale pay—How to avoid losses—How to write letters that build business.

AND THEN . . .

Whatever else you need to know to make your business run smoothly MOTOR AGE will tell you if you only ask—All personal inquiries receive personal attention from our editors. Every subscriber is encouraged to come to us with his problems, whether mechanical, legal, architectural or financial. Try us, and we will give you "Service you will like."

THE COUPON is here for your convenience. If you are already a subscriber, pass it on to some friend in the trade who is not. When he starts getting MOTOR AGE he'll appreciate the favor.

MOTOR AGE
Chestnut and 56th Streets
Philadelphia, Pa.

IMPORTANT—MOTOR AGE is published exclusively for the trade. Subscriptions are accepted only from those actively engaged in our field—so please don't forget to include your business card or letter head with this order.

Gentlemen: Enclosed find \$3.00 to pay for a year's subscription to MOTOR AGE, including all special issues published during the life of my subscription.

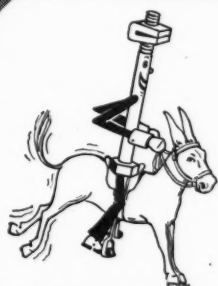
Name

Street and Number

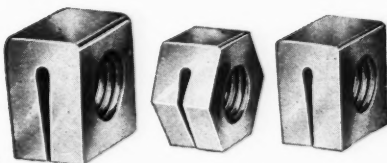
City State

Firm Name

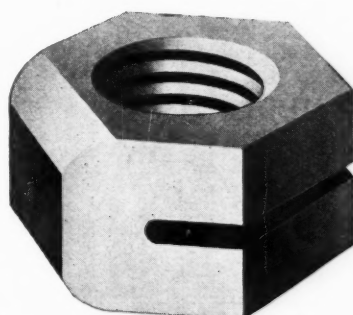
NOTE: If you are already subscribing to MOTOR AGE, please hand this coupon to a dealer who is not. He'll become a better competitor from reading MOTOR AGE.



For Dependability



Buy the Nut
that won't
work loose!

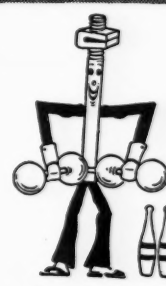


CHAPNUT
REGISTERED TRADE MARK

Accidents won't happen with CHAPNUT. When a bolt stretches, the CHAPNUT stays firm. It needs only to be drawn up another turn or so. But when a nut is used with a lock washer, the locking contrivance is useless, as soon as the bolt stretches, and the nut is jarred off at the least vibration. Slotted nuts, used with cotter pins, are just as unsafe. The cotter pins are liable to shear off at any time. But with the CHAPNUT you are secure. It has never been used that it did not stay fast, under even the heaviest strain.

"It Won't Shake Loose"

NATIONAL NUT & BOLT COMPANY
Sole Manufacturers of the
CHAPNUT
REGISTERED TRADE MARK
NORTH EASTON, MASS.



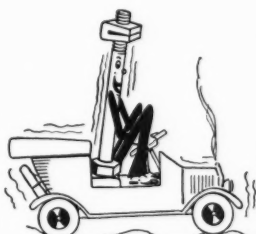
For Stability



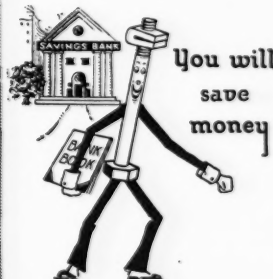
For Salability



For Silent Service



Laugh at Vibration

You will
save
money

For Efficiency



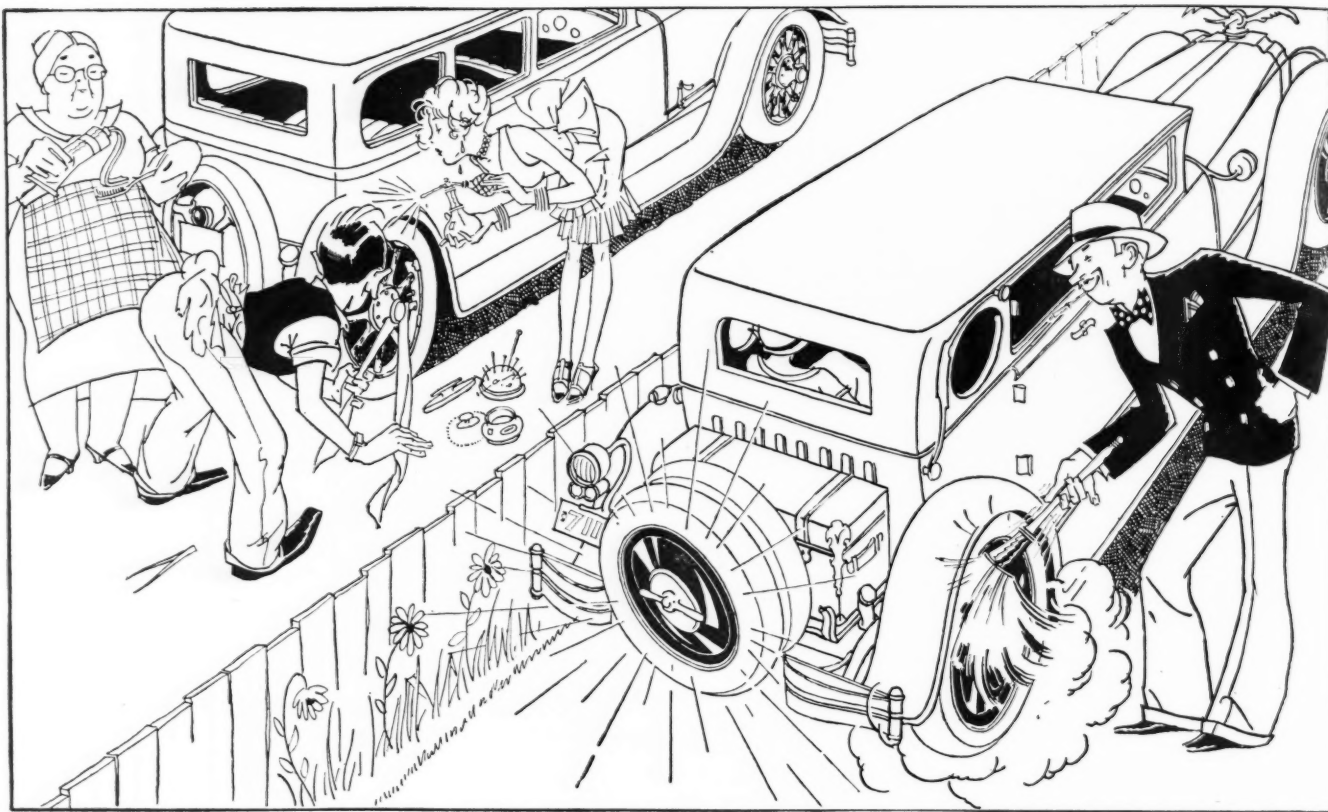
Save Time



For Safety



Save on Repairs



You don't have to use dental floss to clean Budd-Michelin Wheels

BUDD-MICHELIN All-Steel Wheels are made to roll smoothly over the roads—not to pick up the road as they go!

Their graceful, polished discs are specialists in whisking the dirt and mud back where it belongs. What little does collect has but a feeble foothold. There are no spokes to become mud-wreathed. There are no cracks, gaps and crevices in which the truant real estate can become packed and ride back to the garage, drying to cement-like hardness before washing time.

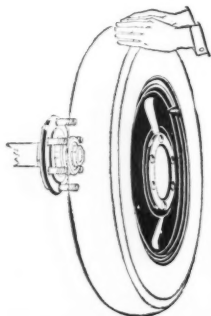
We don't say that Budd-Michelin Wheels can always be restored to gleaming neatness by the mere flicking of a duster . . . but they can be more often than any other type wheel. And when water must be used, there is as much difference between washing a Budd-Michelin and a wood spoke wheel as there is between washing a porcelain dish and an eggbeater!

The man who likes the painful job of freeing spokes from dirt hasn't been found yet . . . so almost every prospect is taken with Budd-Michelin's easy-cleaning qualities. It is a good point to remember.

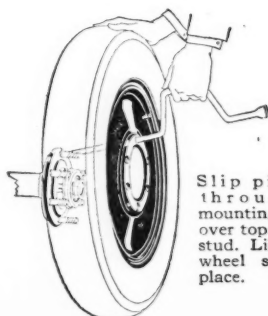
BUDD

WHEEL COMPANY . . . Detroit

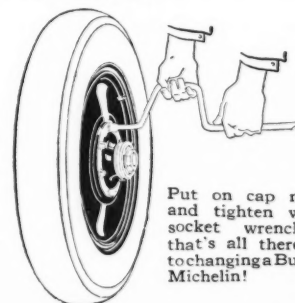
Budd Service Stations in all principal cities—parts and service for wheels of every type.



To put on a Budd-Michelin Wheel, set brakes and place wheel in position before the mounting studs.



Slip pilot bar through top mounting hole and over top mounting stud. Lift up and wheel slides into place.



Put on cap nuts and tighten with socket wrench—that's all there is to changing a Budd-Michelin!

A M E R I C A ' S F I N E S T T Y P E O F M O T O R

A Growing Public Interest In Knight-Engined Cars

One outstanding development in the automotive industry is the rapidly expanding market for Knight-engined cars.

This growing popularity of Knight-engined cars is a natural trend toward better motor performance, longer life, freedom from carbon annoyance and mechanical trouble.

For years to come the demand for cars powered by the famous Knight engine will continue to grow at a rapid rate.

Falcon-Knight dealers are building a permanent business on a sound foundation.

FALCON MOTORS CORPORATION · DETROIT

Falcon-Knight





AT TOMORROW'S SALES MEETING – *what will you have to tell your men?*

When you come to the subject of "Lost Sales" will you be apologizing to your salesmen, or will they be explaining to you?

If you handle only one car in a single price field, your salesmen can put you on the defensive and keep you there. If you handle a quality car in every price class your salesmen can only blame themselves for their lost sales.

The Willys-Overland franchise gives you a car for every buyer, regardless of what he wants to pay. That's why it's a safe, sound franchise for you to consider right now.

WILLYS-KNIGHT

Whippet

The WHIPPET *and* WILLYS-KNIGHT Line Covers 97% of all Motor Car Buyers

An energetic retail sales force is no longer contented to be limited to a single price field—which means wasted effort and a high percentage of lost sales.

The one-car franchise is disappearing—giving way to a sounder basis of selling, just as surely as 4-wheel brake cars are replacing those with only two.

The Willys-Overland franchise gives *complete market coverage*—with quality cars and exclusive features in every price class.

The Whippet and Willys-Knight line, ranging from \$625 to \$2950, covers 97% of all motor car buyers. The Company's program is progressive, and its policies toward dealers notably fair. Liberal discounts, sound cooperation in merchandising used cars, and a specific Sales Plan for your particular community, help you profit.

Write for particulars today. Sales Department, Willys-Overland, Inc., Toledo, Ohio. Willys-Overland Sales Co., Ltd., Toronto, Canada.

Fine Motor Cars ~



"Sold 125 Winterfronts in One Day—at Retail!"

***A** CHICAGO Winterfront dealer did it one day last fall. Let him tell you the story—

"I thought we were prepared for the Winterfront rush you warned me about—but it came overnight in such tremendous volume that we were actually swamped. From early morning until closing time—cars were lined up waiting for Winterfront installations. We kept ten men busy for weeks last winter—taking care of the steady demand. On October ?? we installed 125 Winterfronts and punched the cash register 125 times. I think if the day had been twice as long—we could have doubled that figure.

"My advice to accessory and car dealers everywhere is to get back of this Winterfront proposition *early*. *Be prepared!* Because the business hits like a bolt out of the sky. We're going to be ready this year. Our stock is ordered for delivery before September first."

*Name of Dealer on Request.

Did you ever "punch the cash register 125 times" in one day on one item? Perhaps you won't do that much Winterfront business—but you'll punch it often enough *every day* to net you a handsome profit. Remember—Winterfront business "hits like a bolt out of the sky." *Be ready!*

Distributors in all Principal Cities

PINES WINTERFRONT COMPANY

422 N. Sacramento Boulevard • Chicago, Ill.

Compressors that Pay a Profit

Model B

At right. A popular single-stage outfit, complete less power. Suitable for use with gas engine or line shaft. Many sizes.

Model H

Below. A complete motor driven unit, available in several sizes. Especially adapted to paint spraying.

Prices as low as
\$140
for complete units



YOUR auto laundry, painting department, even your "free air" outlets are all intended to earn a profit, now or later. Make sure, therefore, that they are powered by Quincy Compressors.

Quincy engineer-built units pay dividends by supplying uniform, dry, clean air when and where you need it; by delivering economical, trouble-free service on a lifetime basis. Because they help you turn out better and quicker jobs, they build your reputation for the future.

The Quincy Catalog, containing specifications of all models, will prove helpful to you when you plan the installation or replacement of any compressor equipment. Write for a copy today.

QUINCY COMPRESSOR CO.

219 Maine Street



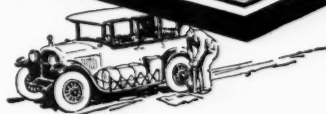
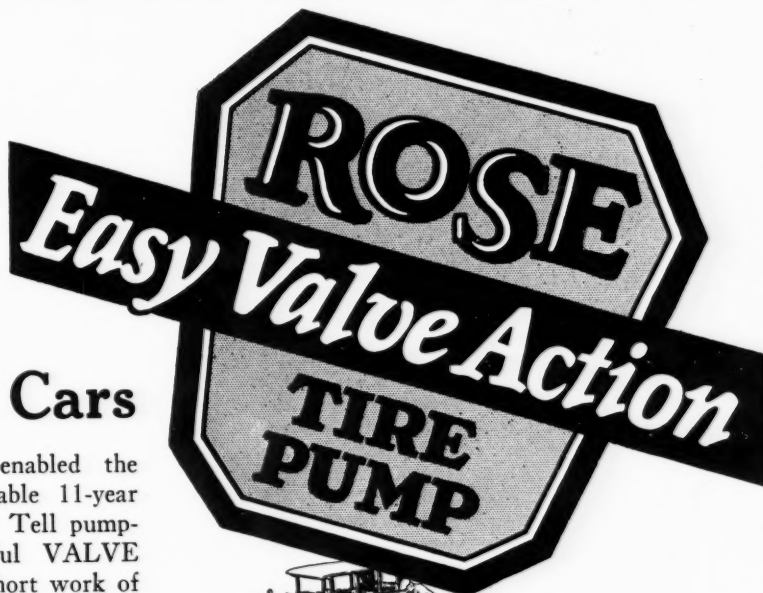
Quincy, Ill.

K583



In 4,000,000 Cars

Easier, quicker pumping has enabled the ROSE to establish its remarkable 11-year record of tire pump leadership. Tell pump-buyers of the smooth, powerful VALVE action. Explain how it makes short work of tire-filling. Just say, "IT PUMPS EASIER." Mention the 5-year guarantee, too. The ROSE has ALL the features that pump-buyers want. Concentrate on ROSE and reap bigger tire-pump profits with smaller investment.



Ask Any Jobber

FRANK ROSE MFG. CO., Hastings, Neb.

KESTER SOLDER

makes quick work of oil system repairs

SOLDERING on any part of the oiling system is a tough job. Regardless of the care used in cleaning, oil will cling to the metal and interfere with soldering.

No difficulty when Kester is used—the scientific flux inside this solder cuts right down to the metal. That's why Kester jobs never return—they hold fast indefinitely.

Kester lengthens your profit by saving one-third the time formerly used. One, five, ten and twenty pound spools handled by jobbers everywhere. The larger the spool the greater the saving.

CHICAGO SOLDER COMPANY
4233 WRIGHTWOOD AVE. CHICAGO, U.S.A.



The Most Beautiful **CHEVROLET** Equipped with
America's Finest Automobile Trunk
designed by **Lorenz**
Waterproof Dustproof

A TRUNK FOR EVERY CAR
There is No Substitute for Lorenz Quality.

LORENZ TRUNK WORKS
MINNEAPOLIS

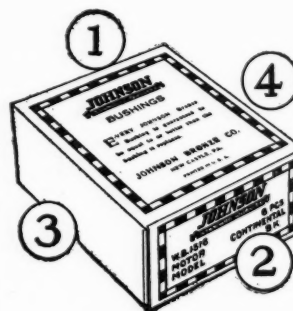
We Recommend Lorenz Equipment for Your Car. Raise the Top Sheet for Complete Information.

DEALERS!

Write us for a **FREE COPY** of the Lorenz Automobile Trunk Sales Chart. Complete specifications for all makes and models of cars. A **REAL PROFIT MAKER!**

LORENZ TRUNK WORKS, INC.

211-213 First Avenue, North
Minneapolis Minnesota



Having—or being able to get quickly—the right bronze bushing when you need it is essential to profitable re-bushing service The Johnson line is complete, even to types and sizes long considered obsolete It is accurate, being made to S. A. E. specifications And there are over five hundred Johnson distributors—one must be near you.

JOHNSON BRONZE CO.
New Castle, Pa.

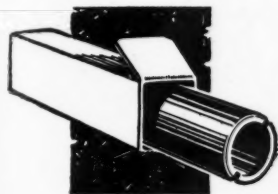
Even the Box Meets Specifications

- 1—Each package contains a full set of the size and type of bushing required for a particular job.
- 2—Each package with clear and distinct label quickly tells the part number, car name and model and number of pieces in a set.
- 3—Each package, whether containing bushings for piston-pin, shackle-bolt, spring-eye, tie-rod, steering knuckle, generator or starting motor, is of convenient size and easy to handle.
- 4—Each package is made of substantial material and withstands the abuses common to shipping. Thus, is it in usable condition when it reaches its destination.

Branches:

Chicago
Kansas City
San Francisco

JOHNSON
STANDARD QUALITY
BUSHINGS



In Stock
5

OVER-SIZES

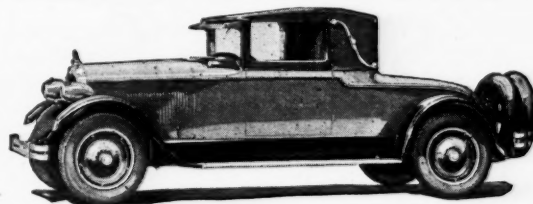
for every standard size and type of piston pin. Delivery starts in one hour after order is received.

Ask your jobber to send your order by wire, using the telegraph ordering code shown in our catalog. Address **THOMPSON PISTON PINS**, Defiance, Ohio.



Get your copy of this 140 page catalog and "cut cost" telegraphic ordering code.

THOMPSON PISTON PINS



Suggest a Second Spare Make a 5-Way Profit!



DUPLEX

Second spare tire carrier locks both tires securely in place.

Duplex equipment and a second spare tire adds that final touch of beauty and insures carefree motoring. Show room models so equipped help new car and accessory sales. Each Duplex sold automatically sells an extra tire, tube, rim and tire cover.

There's a second spare tire carrier for every make and model car. Retail from \$1.00 to \$10.00.

Get into this 5-way profit game

Write for complete catalogue. Duplex carriers are carried in stock by National Wheel and Rim Distributors and by leading Accessory Jobbers everywhere.

TRIPP-SECORD & CO.

642 Beaubien Street

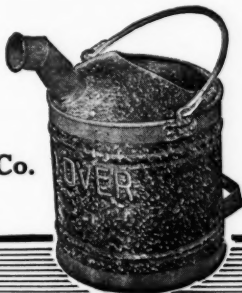
Detroit, Mich.

MANUFACTURERS OF AUTOMOTIVE NECESSITIES

New DOVER RADIATOR FILLERS Speed Up Your Service

Especially designed for garage, service station and fleet owner. Made of heavy steel, galvanized after making. Rust-proof and sturdy. Guaranteed not to leak. An absolute winter necessity. Capacity 3 gallons. List \$2.80.

Dover Stamping & Mfg. Co.
385 Putnam Ave.
Cambridge, Mass.



Genuine CANTON 2-TON CRANE

Easy Payment Plan

Biggest Value

\$125



When you buy a 2-ton CANTON—you buy what WILL LAST A LIFETIME. This is TRUE ECONOMY. Castings are semi-steel; BBB hand forged chain, Hyatt Bearings. Used by Ford, Dodge, Packard. Two designs, ratchet and pawl—\$125. Safety Friction Load Brake \$50 additional. Can easily be installed on old cranes. Meets all State Safety Codes. Catalog. Ask about our Easy Payment Plan.

CANTON FOUNDRY & MACHINE CO.
CANTON, OHIO

DeLuxe PISTON Step-Cut RINGS (PLAIN)

Recondition Worn Motors

De Luxe Step-Cut Piston Rings are new and different—the most perfect plain ring obtainable. They are absolutely true in roundness, flatness and finish, and have unusual tension producing real power. They cut motor reconditioning costs and turn out a job that car owners cheer about. A money maker for you, because they sell at lower prices. Write today for complete information.

CORK-SEALED PISTON RING CORP.

2332 S. Michigan Ave., Chicago Factory: Denver, Colo.
Canadian Distributors: Cork-Sealed Piston Ring Corp., Toronto, Canada

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Learn the interesting details from our descriptive data.

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic — except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N.J.
"Established Since 1904"

SIMPLEX Piston Rings

enable the small garage to recondition worn motors perfectly without resizing cylinders and installing new pistons. Two Simplex rings to each cylinder positively stop oil pumping, piston slap and compression loss. Pressure lubrication, less friction, more power.

Send for the Simplex Method of reconditioning motors without cylinder machinery, and make more money.

**The Simplex Piston Ring Co.
of America, Inc.**

1971 East 66th St., Cleveland, Ohio

JOHNS-MANVILLE Asbestos Brake Lining

free
write for
your copy

**The Book
"AIR PROFITS"**
Shows how to get
more work out of
an air compressor.
How to use com-
pressed air for
many pay jobs.

BRUNNER MFG. CO.
UTICA NEW YORK

BRUNNER
AIR COMPRESSORS

CELORON TIMING GEARS

Save every part of the Timing Mechanism from the wearing effects of vibration and shock

The Celoron Company
Division of Diamond State Fibre Co.
Bridgeport, Pa.

Weidenhoff Shop
Equipment
for Battery and
Electrical Service
4358 Roosevelt Road Chicago, Illinois

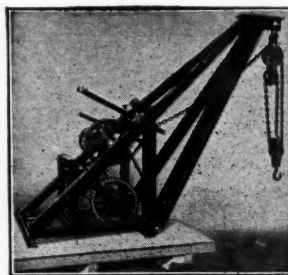
Bigler MOTOR BETTER BUILT TRUNKS

Motor Trunks, Racks and Equipment exclusively. All types and styles. Genuine Duco finish, or bright black. A money-making line. Write.

BIGLER MANUFACTURING CO.
CHIPPEWA FALLS High St. WISCONSIN

Two Hones in One
HALL HONE \$39.75
Solid Pressure — Spring Pressure
at your
Jobber's

Why Pay More For Less?



Average Good
Crane \$110

"A.C.E." 3-ton
Better Crane 78

YOU SAVE . \$ 32

Wise buyers buy "ACE" Cranes and apply the saving to the purchase of some other needed equipment. How About You?

Write for catalog of Grease-Racks, Portable Inclines, Steel Horses, Tire Racks, etc.
Jobbers! It will pay you to write for the "A. C. E." Proposition.

AIR COMPRESSOR & EQUIPMENT CO.
288 E. Genesee St., Buffalo, N. Y.

FAWSCO WRENCHES

New Style

Are the Best

No. 121 Circular Tells

FAWSCO WRENCH CO., 27 Warren St., New York City



PEERLESS

Price Range - - \$1295 to \$3795

The famous V-type 8-69, the Six-72, the Six-80, the Six-90 and the new Six-60

PEERLESS MOTOR CAR CORP. Cleveland, Ohio

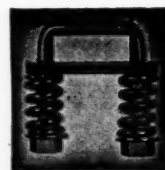
THE G- H LINE

OF REPLACEMENT PARTS

Brake Springs, Clutch Plates, G-H Tension Rings, King Bolt Lock Pins, King Bolt Thrust Washers, Piston Pin Retaining Springs, Valve Lifter Assemblies, Valve Springs, Valve Stem Keys, Valves.

G-H MANUFACTURING
COMPANY, Inc.
6-8 East Mount Royal Ave.,
Baltimore, Md.

G YPSY AUTO LIGHT
Both products with easy sales—one for use by owners, one by shopmen. A good combination for profits. Write
GLADE MANUFACTURING CO.
209 S. State St. Chicago
GLADE SHOP LIGHT



Orrville Spring Governors

Make Smooth-Running Profits

Among the foremost popular sellers for easier riding. Simple in operation and easy to install. Check the rebound and control the springs against "galloping". Ask for illustrated literature and discounts worth while.

ORRVILLE SPRING GOVERNOR CO., INC.
500 Brant Bldg. Canton, Ohio

Pat. Pending

Gilmer

Makers of
the worlds
best known
fan belts.

L. H. GILMER & CO., Tacony, Philadelphia



Portable Electric DRILLS

GRINDERS—POLISHERS

Ask for Catalog 105

The United States Electric Tool Co. Cincinnati, Ohio, U. S. A.
Oldest Builders of Electric Drills and Grinders in the World

Simplicity

REG. U. S. PAT. OFF.

REBORER AND GRINDER

A big money-maker in any automobile repair shop or garage. Ask for free demonstration in your own shop.

SIMPLICITY MANUFACTURING COMPANY

Port Washington

Wisconsin

STATE AUTO TRUNKS

2011-13-15 S. STATE ST.
CHICAGO, ILL.

Wide assortment of automobile trunks for various model cars. Absolutely new stock, each

Wire or write today for New and Used TIRES—PARTS—ACCESSORIES—If its for an Automobile We Have It. **\$9.95**

Tasco

TRADE MARK REG.

Gas Gauge for Ford Chevrolet—Overland—Star Sells quick at \$1.25 retail. Types "K" and "J" for 1926 Chevrolets and all Stars sell at \$1.50.

THE AKRON-SELLE CO.

AKRON, OHIO



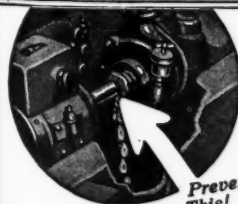
An Advertising Campaign in Motor Age right now will build summer sales
MOTOR AGE



PISTONS FITTED WITH PINS

Arrow Head standards are the same for both equipment and replacement. The motor's reputation in the field must be carefully maintained.

ARROW HEAD STEEL PRODUCTS COMPANY
Buffalo Minneapolis, Minnesota Chicago
Axle and Drive Shafts



It's a Permanent Repair!

Have a can of CONNEAUT PLASTIC METALLIC PACKING in your garage and be ready for the fellow who says he can't keep his water-pump from leaking. All sizes in one can. Stocked with your Jobber.

1 lb. can\$1.75 per lb.
5 lb. can1.60 per lb.

Manufactured by
THE CONNEAUT PACKING COMPANY
Conneaut Ohio

CLASSIFIED ADVERTISING RATES

Ten cents a word is the rate for all undisplayed advertisements set solid, regular want ad style; minimum charge \$1 an insertion. All capitals, 12c a word; all capitals, leaded, 15c a word. Payable in advance.

CLASSIFIED ADVERTISEMENTS

ATTENTION MANUFACTURERS

for sale or royalty basis a new battery terminal that eliminates all terminal troubles. If interested, write J. W. Bone, P. O. Box 1152.

SALES EXECUTIVE

Man with wide wholesale experience will be available September First. Best of references. Prefer New York metropolitan territory.

Box No. 6304, Motor Age

SHIP US YOUR
STEWART—A.C.—NORTH EAST
SPEEDOMETERS FOR REPAIR
Catalogue of Parts and Repair Charges Sent upon request, WRITE!
SPEEDOMETER SERVICE

1919-21 Chateau St., N. S., Pittsburgh, Pa.
WE ARE NO FURTHER THAN YOUR NEAREST MAIL BOX



Biflex Cushion Bumpers



America's
Most Beautiful
Bumper

THE BIFLEX CORPORATION, WAUKEGAN, ILL.

BELLEVUE

Trunks, Trunk Carriers, Pumps, Bumpers, Jacks

See our combination trunk, trunk carrier, spare tire carrier and bumperette. COMPLETE line for all cars. Write for prices and nearest jobber.

THE BELLEVUE MFG. CO.

Bellevue, Ohio

WE MAKE RADIATOR CORE MACHINERY

Write for Catalog and Prices

RADIATOR ENGINEERING CO.

FACTORIES BLDG.

TOLEDO, OHIO

STANDITALL AUTO RADIATOR

Damageproof against repeated boilings and freezings. Built to last the full life of the car. Complete radiators for Fords, Chevrolets, Dodges and Maxwells. Cores for all cars and TRUCKS. If not at your jobber's, write direct.

J. C. Black Mfg. Co., Inc., Oil City, Pa.

EATON SPRINGS FOR REPLACEMENT

STANDARD EQUIPMENT ON AMERICA'S LEADING CARS AND TRUCKS
THE EATON BUMPER & SPRING SERVICE CO., Cleveland, Ohio

WEL-EVER

"OIL CONTROL" PISTON RINGS

The Motor Necessity That Has Made Good
Backed by Seven Years' Satisfactory Service

THE WEL-EVER PISTON RING CO. TOLEDO, OHIO
Sold most everywhere. If your dealer cannot supply you write us.

C. L. PARKER

Ex-Examiner U. S. Patent Office

Attorney-at-Law and Solicitor of Patents

McGill Building, Washington, D. C.

Patent, Trade Mark and Copyright Law



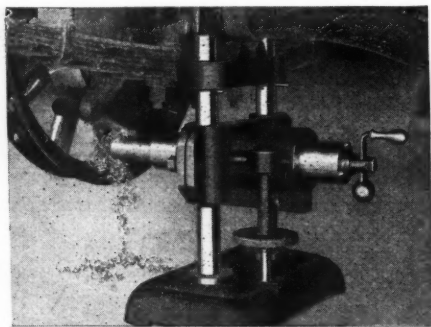
THE B & R 15-U UNIVERSAL CHARGER
By simple adjustment of the plug gives high efficiency at 5, 10 or 15 battery rates, and keeps electric bills small.
Price, 110 volts only, 60 cycles.....\$78.00

B & R
BATTERY CHARGERS



Car Dealers

In line with your definite need for making more money from service work, don't overlook the profits to be derived from battery charging. Write Burton & Rogers Manufacturing Company, Boston, Mass., for information or ASK YOUR JOBBER'S SALESMAN.



The Improved DUO Brake Drum Refacing and Truing Tool Clears A Big Profit on Every Job

Because it works faster and better, and does the job of brake drum refacing and truing without removing the drum from the car, this outfit sets a new record in shop profits for its type of work.

This tool sits under axle similar to a jack, and by using the power of the engine to turn the drum, it not only refaces, but at the same time trues up the drum to within one-thousandth of an inch.

Economy to the Car Owner—Increased profits for the shop, and a better job.

Universal for Every Car and Truck

DUO MFG. COMPANY

6578 Epworth Blvd.

Detroit, Michigan

Or Your Local Jobber

Index to the

The Advertisers' Index is published as a convenience, and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

A	E
AC Spark Plug Co..Back Cover	Eaton Bumper & Spring Service Co. 87
Air Compressor & Equipment Co. 86	
Akron-Selle Co., The 87	
Albertson & Co.....3rd Cover	
American Chain Co., Inc.... 62	
American Telephone & Telegraph Co. 64	
Arrow Head Steel Prods. .. 87	
Auburn Automobile Co....65, 66	
B	F
Bearings Co. of America... 3	Falcon Motors Corp. 79
Bellevue Mfg. Co., The ... 87	Faw, J. H., Co..... 86
Biflex Corporation 87	Follett Time Recording Co. 85
Bigler Mfg. Company 86	Franklin Automobile Co.... 57
Black, J. C., Mfg. Co. 87	Fredericks, H. M., Co. 74
Brunner Mfg. Co. 86	
Budd Wheel Co. 78	
Burton-Rogers Mfg. Co. ... 88	
C	G
Canton Foundry & Machine Co. 85	G. H. Mfg. Co. 86
Celoron Co. 86	Gardner Motor Co. 90
Chicago Solder Company... 84	Gates Rubber Co. 4
Chrysler Sales Corp.....68, 69	General Electric Co. 67
Classified Advertising Section 87	Gilmer Co., L. H. 86
Conneaut Packing Co. 87	Glade Mfg. Co. 86
Cork Sealed Piston Ring Corp. 85	
Curtis Pneumatic Machinery Co. 2, 63	
D	H
Day-Fan Electric Co. 55	Hall Mfg. Company 86
Dover Stamping & Mfg. Co. 85	Hardie Mfg. Co. 6
Duo Mfg. Cp. 88	Honold Mfg. Co. 71
J	I
Johns-Manville, Inc. 86	
Johnson Bronze "Co. 84	
Jordan Motor Car Co. Front Cover	

Advertisements

L

Lorenz Trunk Works 84
Lyon Metallic Mfg. Co. ... 70

R

Radiator Engineering Co... 87
Rose Mfg. Co., Frank..... 83

M

Manley Mfg. Co.....72, 73
Motor Age 76

S

Speedometer Service Co. of
Pittsburgh 87
Simplex Piston Ring Co. of
America, Inc. 86
Simplicity Mfg. Co. 87
State Auto Parts Co. 87
Stromberg Motor Devices.. 75
Studebaker Corp. of America 5

N

National Nut & Bolt Co. ... 77
New Departure Mfg. Co.... 7

T

Thompson Piston Pins 85
Thompson Products, Inc. 58, 59
Timken Roller Bearing Co. 8
Tripp Secord & Co. 85

P

Paige-Detroit Motor Car Co.
60, 61
Parker, C. L. 87
Peerless Motor Car Co. ... 86
Pines Winterfront Co. 82
Protex Chain Co...Second Cover

U

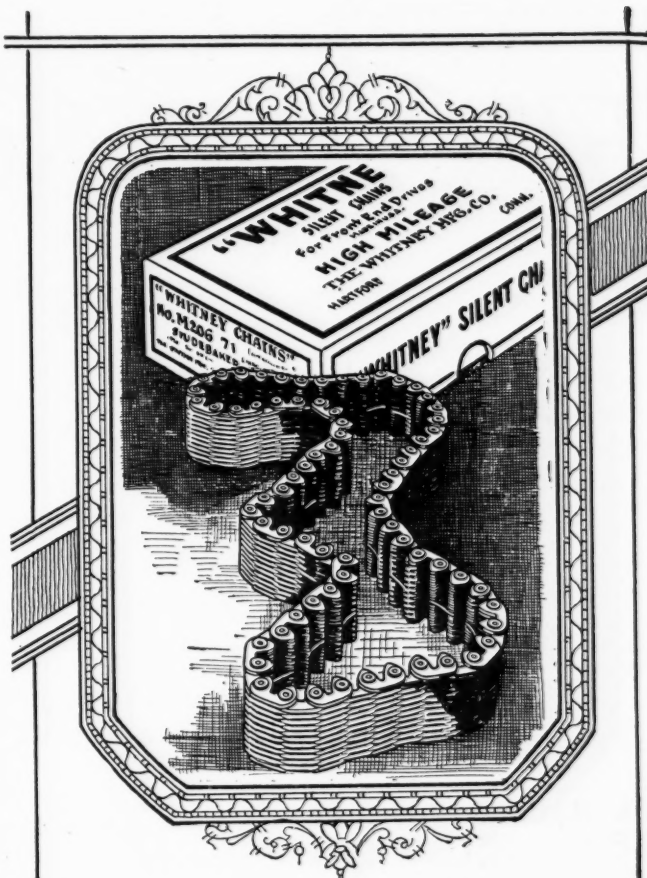
U. S. Electric Tool Co.87

W

Weaver Mfg. Co. 1
Weidenhoff, Joseph 86
Wel-Ever Piston Ring Co... 87
Whitney Mfg. Co. 89
Willys-Overland, Inc.80, 81

Q

Quincy Compressor Co. ... 83



LOST POWER

is one of the common complaints of motor trouble.

Frequently the difficulty can be traced to retarded timing and the SILENT TIMING CHAIN should be replaced.

Service men who seek to serve the customer's best interest specify "WHITNEYS" because they are

QUIET and PERMANENT
REPLACEMENTS

WHITNEY

SILENT  TIMING

CHAINS

THE WHITNEY MFG. CO.
HARTFORD, CONNECTICUT

FIRST to Standardize Eight-in-line Field

Gardner does it with 4 Great Eights!

The buying trend is taking a turn. It is now in full swing toward the *Eight-in-line*.

The universal acceptance of the *Eight-in-line* has staggered competition.

It has ushered in and opened wide a new era, and did it gracefully and profitably.

Recognizing this last year, Gardner brought out two lines of eights. Now Gardner again takes the initiative by producing four great *Eights-in-line*.

It thus becomes the first company in the industry to standardize the *Eight-in-line* field with a complete range of distinctive body styles covering a price range which extends from the

competitive six field to the buyer to whom price is no object.

Gardner production now comprises four series of *Eights-in-line*: 75's—80's—85's and 90's, offering four distinct model groups with many body designs. The price range is from \$1,475.00 to \$2,475.00—a complete line that will win and close any buyer this side of the 4-cylinder class.

Gardner dealers everywhere have been potent factors in establishing *Eight-in-line* popularity. They are nailing fast the patronage of the motor-wise public on appearance, price, performance and individuality with the type of car that answers the call of the progressive buyer. Write today. Your request will bring full details.



THE GARDNER MOTOR CO., INC., ST. LOUIS, U. S. A.

Builders of Eights-in-line Exclusively

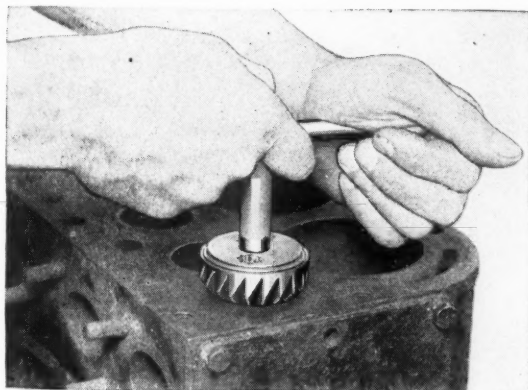
The GARDNER EIGHT-IN-LINE

~THAT DISTINCTIVELY DIFFERENT MOTOR CAR



VALVE SEAT REAMERS

UNIVERSAL TYPE



The 45° Sioux Roughing Reamer removes the hard glazed surface easily and quickly.



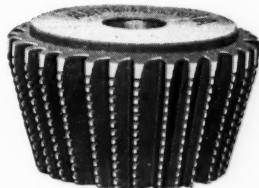
Sioux 45° Roughing Reamer-Universal Type



Sioux 45° Finishing Reamer-Universal Type



Sioux 15° and 75° Reamers for narrowing valve seats. A wide seat never makes a satisfactory joint.



Patented Sept. 7, 1926.

**Your Jobber
Sells Them**

Precision Valve-seating in Record Time!

YOU will be pleased with your profits and your customers will be "tickled pink" with the power, speed, and pick-up of their cars—when valve-seating jobs are done the "Sioux" way. Sioux Universal Type Reamers give you the most accurate and fastest-working reamer equipment for a wide range of work at small cost—making it unnecessary to buy so many different sizes.

Sioux 15° and 75° Reamers offer the easiest, quickest and most accurate method for narrowing valve seats to proper width and in correct alignment with guide holes. The exclusive nicked tooth feature makes the work easier, produces a better finish, and lengthens life of reamers.

For accurate work, the pilot stem should fit snugly in guide hole. All sizes of Sioux Pilot Stems are made in .001, .002, .003 and .004 oversize, at same prices.



ALBERTSON & COMPANY
Sioux City, Iowa, U.S.A.

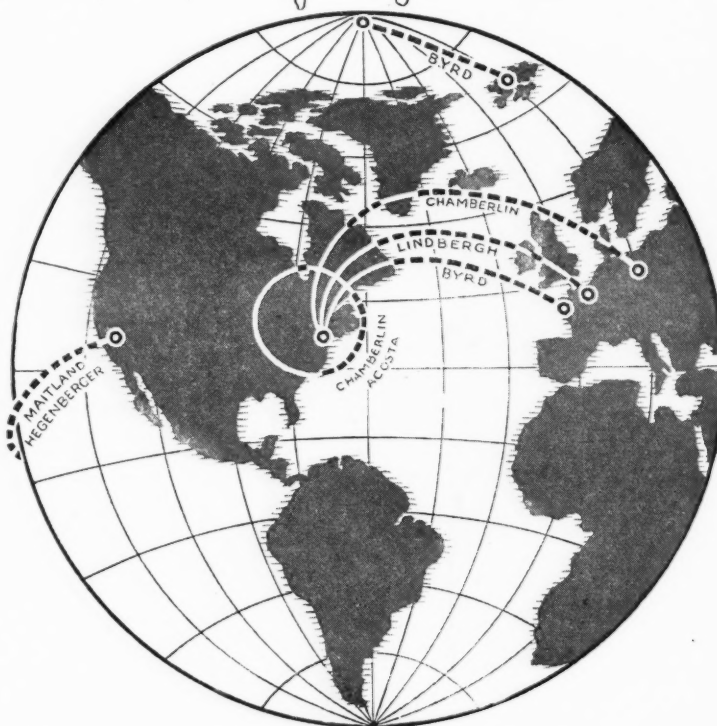
SKY WRITING

Lindbergh Byrd Maitland Hegenberger Acosta Chamberlin

Commander Byrd, New York to Coast of France, Fokker plane, AC Spark Plugs.

Lieutenants Maitland and Hegenberger, Oakland, Calif., to Honolulu, Fokker plane, AC Spark Plugs.

Col. Charles A. Lindbergh, New York to Paris, Ryan plane, AC Spark Plugs.



Clarence D. Chamberlin, New York to Germany, Bellanca plane, AC Spark Plugs.

Commander Byrd, North Pole and return, Fokker plane, AC Spark Plugs.

Chamberlin and Acosta world record endurance flight, Bellanca plane, AC Spark Plugs.

TRAIL BLAZERS OF THE AIR WRITE A MESSAGE FOR YOU

Dealers, tell your customers AC is the plug on which Lindbergh, Byrd, Chamberlin and other great flyers staked their lives.

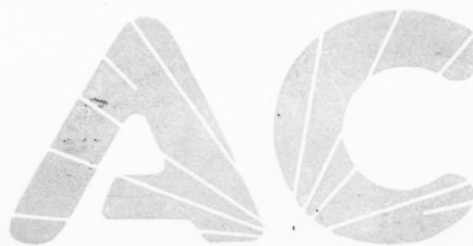
Tell your customers you can give them the same kind of AC Plugs—same insulation, same quality of elec-

trode, same basic design, that made possible these record breaking flights. If you tell these facts, you can sell an even greater volume of AC Spark Plugs.

AC Spark Plug Company
Flint, Michigan

Makers of AC Spark Plugs—AC Speedometers
AC Air Cleaners—AC Oil Filters
AC Gasoline Strainers

AC-SPHINX AC-TITAN
Birmingham, England Clichy (Seine), France



Over 200 of the world's most successful manufacturers use one or more, or all of these AC Products
AC SPARK PLUGS AC SPEEDOMETERS AC AIR CLEANERS AC OIL FILTERS

in,
ay,
urk

th
er

ta
ce
AC

R
U
e
s.
n
of
y
ets
nce
s
5